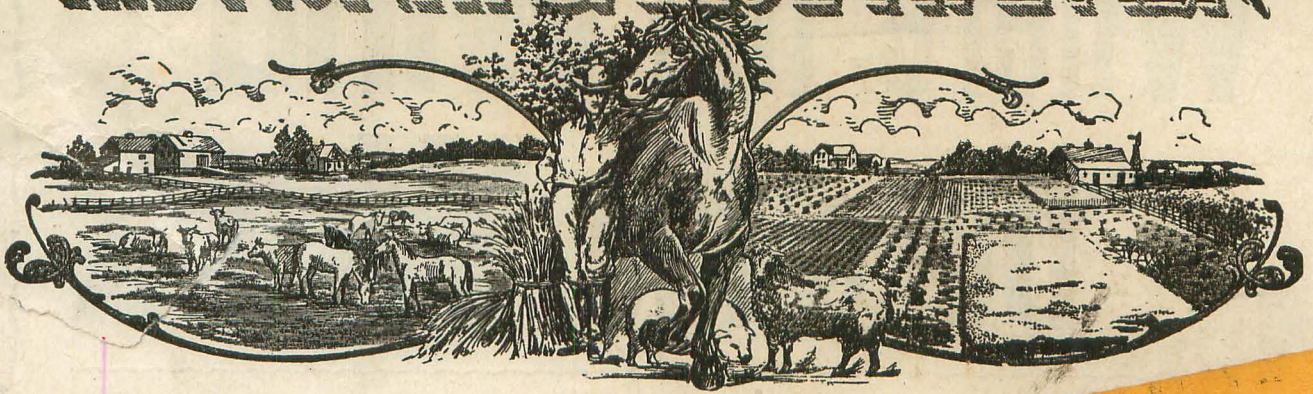


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# THE NORTH DAKOTA FARMER



50 Cents A Year

Vol. 18, No. 1

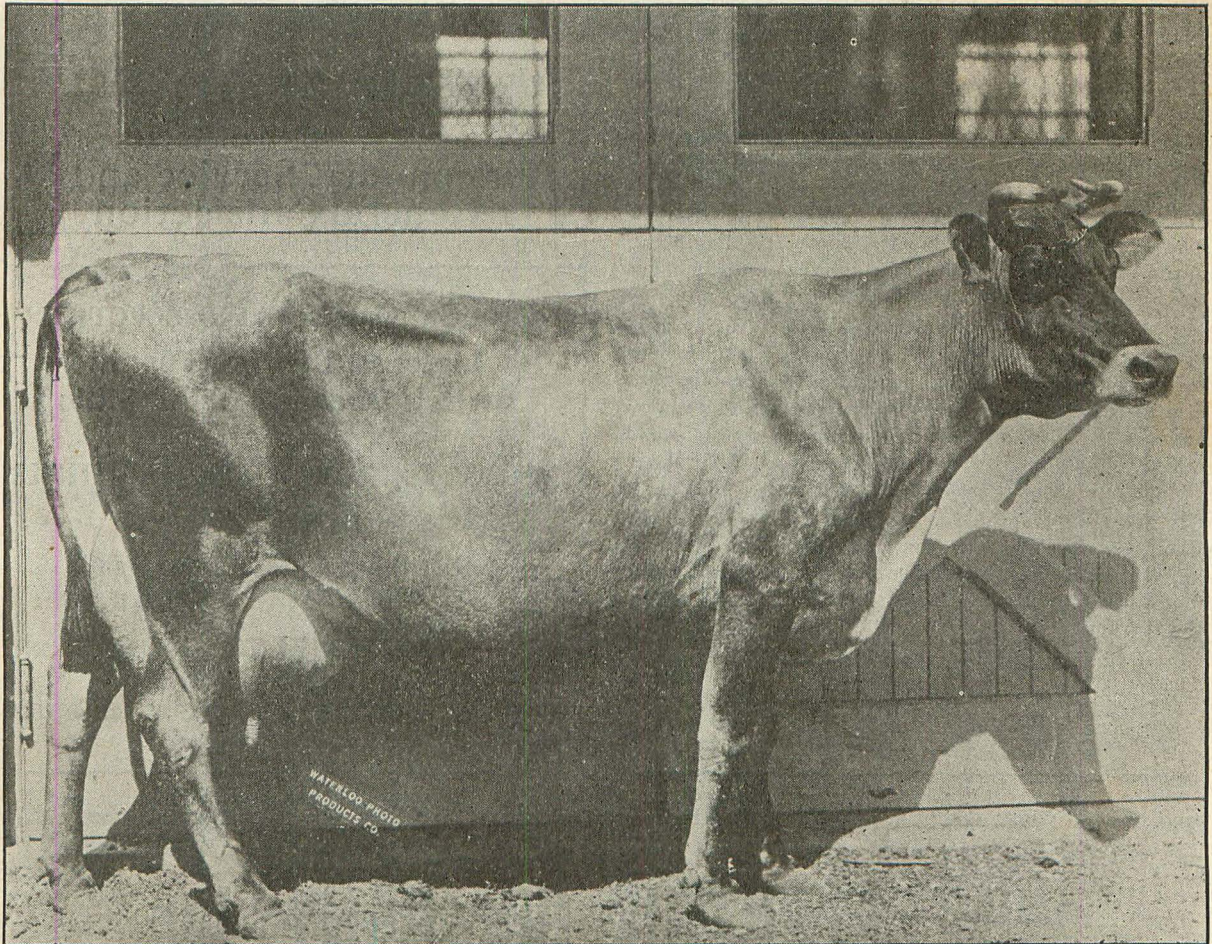
Alex Allin

517

Lisbon, N. D.

July 15, 1916

Fargo, N. D.



Dosories Park Lily 233783, Grand Champion of 1915, Owned by Estate of Chas. Pratt, Glen Cove, N. Y.

972.7  
N814  
Pratt



# Where the Wind Does the Work

## TO WHOM IT MAY BE OF INTEREST:

The Windmill Electric Plant which we purchased from Mr. George Manikowske and which he installed in the month of February, 1915, has been running now within a few days of a year and every unit of the plant has as yet proved a perfect success and I think if there were any flaws or errors in the plant I should surely have come in contact with some of them. Its main fuel is the wind with a little distilled water for the batteries. We oil the generator and idler once a week; the wheel running on a large pair of Timken Roller Bearings needs but very little oil.

The generator which we have is a  $1\frac{1}{2}$  K. W. and gives a flow of thirty amperes at fifty volts; but the wheel has power in almost any kind of wind we have to drive a generator of at least two kilowatts. Still the one which we have, if we had a storage battery large enough, would light two or three farms as large as ours. The switchboard is practically automatic, having an automatic regulator holding the voltage on the lights at 32 volts.

We have the Edison Storage Battery, being a 36 volt 225 ampere hour battery, which has furnished us lights and current to pump water into the pressure tank also to run cream separator, electric iron and vacuum sweeper. We are more than pleased with the plant and also the careful attention of Mr. George Manikowske in connection with the welfare of the plant.

We wish you the advantage of an Electric Light Plant generated by the wind and Mr. George Manikowske the success of selling you the same as he has the first and as yet the only successful Electric Windmill on the market.

Giving you my best regards, I remain

JOHN L. WILLIAMS,  
R. No. 1, Cleveland, N. D.

## OUR ABSOLUTE GUARANTEE OF SATISFACTION

is a certificate of deposit for the full amount of your investment until you are fully satisfied that your plant is worth every cent you have paid for it.

WIND ELECTRIC COMPANY, Inc.

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MEANS

Economy, Service and  
General Satisfaction

MANUFACTURERS "WIND ELECTRIC"

Light and Power Plants  
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will give you light and power for  
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"WIND ELECTRIC"

MEANS

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GEO. MANIKOWSKE, Pres. B. H. PURDON, Vice Pres. WALLACE MANIKOWSKE, Secy. GEO. MANIKOWSKE, Treas.

**WIND ELECTRIC COMPANY, Inc.**  
**WYNDMERE - - - NORTH DAKOTA**



# THE NORTH DAKOTA FARMER

Vol. 18 No. 1

LISBON and FARGO, N. D., JULY 15, 1916

50 Cents a Year

## Let Us Reason Together

### LIVESTOCK ON THE FARM

**W**HILE pioneer conditions prevailed it was but natural that agriculture should pursue the line of least resistance. This was raising small grain, principally wheat. Moreover raising wheat was quite profitable. It also was fascinating since it required but little expert knowledge and occupied but a trifle more than half a year to produce and dispose of a crop.

As a result large areas of land were secured and wheat manufacturing was carried on by men of means, many of them wholly ignorant of farming, but able by means of a capable foreman and the necessary farm equipment to plow, sow, harvest and thresh on a large scale. The soil was new, weeds had not yet gained a foothold and plant diseases did not seriously menace their crops.

The question of soil exhaustion gave them little or no concern, many pretending to believe its fertility inexhaustible. More likely they anticipated the fertility would last until their fortunes were made then they would hie themselves to fairer climes and leave the worn out soils to return to a state of nature or for others to rejuvenate it.

But a tremendous change of sentiment has taken place. Instead of this being a good country to make money in and depart from, it is being more and more recognized as being a good country in which to both make money and establish permanent homes. Instead, therefore, of exploiting the farm by robbing it of its fertility by continuous cropping to wheat or other small grains, the progressive farmer aims to improve its fertility and leave the farm, rather than a cash legacy, for his children. This can only be accomplished by keeping livestock on the farm and in due proportion to the amount of grain that is produced for export.

Livestock insures many advantages. Aside from the fertility they produce

for the farm, which alone makes the keeping of livestock worth while, they insure steady work thruout the entire year on remunerative terms. This of itself is of great benefit to the state and to the people. To work only about seven months of the year, then take the profits of the summer and spend the bulk of it where the people depend on the "tourist harvest" for a living is unfair to the state and generally demoralizing to those who practise it. This is especially true of young farmers. It creates a spirit of discontent and easy spending which is not conducive to the best standard of

surer source of income than wheat or flax, and by converting coarse and damaged grains into beef, pork, wool or dairy products, as the case may be, avoid waste.

There are many reasons, therefore, why every farm should entertain a reasonable proportion of livestock and very few, if any, against it.

There will always be a good market for livestock and dairy products, with a larger and more profitable market when farmers, by co-operation, exercise some influence on the distribution end of their business.

During the past seven years our population increased about 13,000,000, while meat animals decreased about 16,000,000. Moreover, since the outbreak of the European war hundreds of thousands of horses have been exported to foreign countries. It would seem, therefore, that the demand for livestock of all kinds, horses as well as cattle, hogs and sheep, would make the breeding and feeding of livestock more profitable than ever before.

Our Northwestern states being peculiarly adapted for the livestock industry, farmers that engage in this important business, even as a side-line, cannot make a mistake.

\* \*

### RURAL CREDITS

The average farmer, it is almost universally conceded, cannot make a net profit on his investment of more than 6%. Many students of rural economy place the average profit as low as 5% and some even less than 4%.

It stands to reason, therefore, that the average rate of interest, which is between 8 and 9%, is not only burdensome but in most cases ruinous to farmers. There are exceptional individuals among farmers who can prosper while paying even 10% on borrowed money, but they are very rare. However, these exceptional individuals are occasionally held up by

### BY THE SWEAT OF OTHERS' FOREHEADS

Toiling hands alone are builders  
Of a nation's wealth and fame;  
Titled laziness is pensioned,  
Fed, and fattened on the same;  
By the sweat of others' foreheads,  
Living only to rejoice,  
While the poor man's outraged  
freedom  
Vainly lifteth up its voice.

citizenship. A band of fine sheep, a bunch of well bred horses or cattle are safer companions to associate with than what often are encountered at fashionable resorts.

As a matter of fact well bred livestock possess a real civilizing influence upon people. The love of animals, aside from the profits they insure, is a most commendable trait to cultivate. A farm, therefore, where livestock is made reasonably prominent is not only sure to be more immediately prosperous, but continuously so, for as before stated, they furnish the fertility that feeds the soil and makes it perennially productive. They are an additional and much



newspapers managed with little real knowledge or conscience, as evidence that farmers are prospering in spite of the high rates of interest they are compelled to pay. The system rather than the banker is at fault.

That the banker is filling a most important place in the economic affairs of the state no intelligent individual will deny. Nevertheless, if the average farmer cannot realize with any degree of certainty more than 6% on his farm investment but is required to pay 8 or 10%, his undoing will occur sooner or later—and generally sooner rather than later. He may hang on like grim death and by working overtime and practicing rigid economy postpone the evil day, but it will come finally and with crushing force.

Small short time loans at 10% do not enter so largely into the problem. It is the mortgage on the farm or livestock to secure money to purchase the home and farm equipment that eats up the earnings and finally the home itself, provided the rate of interest demanded is above the profits of the farm.

To determine the net profits of the farm there must first be deducted the taxes, labor, insurance, seed, depreciation of work animals and farm machinery and buildings, legal and medical service, cost of living, etc., etc., and the surplus, if any, will determine the dividend on the total investment.

If, in spite of hard labor on the part of the entire family and the most rigid economy the farm should make eight and one-half per cent, (about the average interest charge for the state) and the proprietor should be mortgaged for one-third to one-half the value of his holdings, would he or the mortgagee be the more prosperous? But suppose he was only able to declare a dividend of 6% or 4%—or none at all?

It must be understood, however, that a farmer may not make expenses, but on account of the rapid appreciation of land values still gain in potential wealth. Were it not so the boasted prosperity of Northwestern farmers would be a myth, so far as the average farmer is concerned. And the great majority of farmers are average farmers.

But the upward trend of land values cannot always continue. Moreover, as land appreciates in value it should to that extent enrich the farmer, not simply keep him out of bankruptcy. The farmer and not the money lender should enjoy the enhanced value of real estate.

Little wonder, therefore, that farmers realizing their helpless condition should demand a system of rural

credits that will enable them not only to make a living, but also to pay their debts. This they cannot hope to do so long as the rate of interest demanded exceeds the average profits of the farm.

If private individuals or banks cannot or will not provide money at interest rates that will enable men to engage with profit in agricultural pursuits, then it becomes the duty of the state to **make** such provision, for agriculture is the life of the state. This the state can do, however, with safety and without charity, because the best security on earth is the earth itself. Good land not encumbered beyond half its value is ample security for money at 4%. The government can get money at 3% without offering any better security.

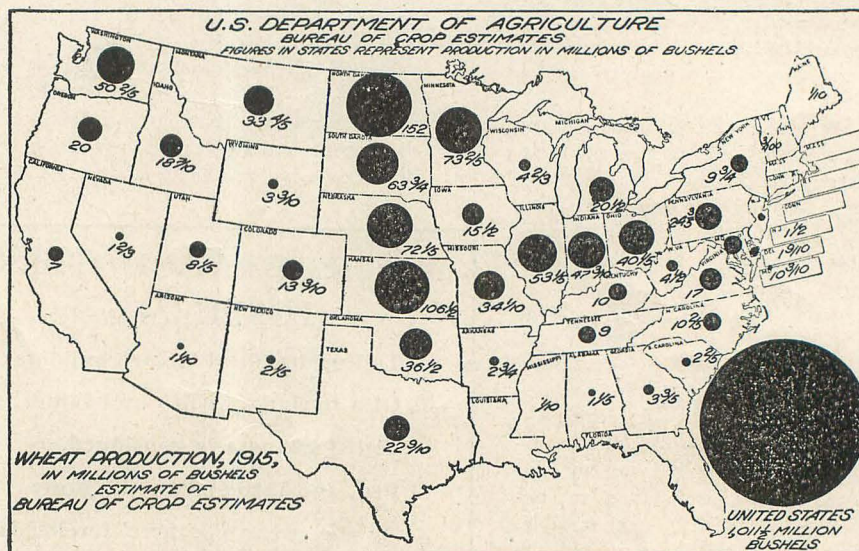
The fact that cheap money for the farmer supplied by a state controlled

establish a system of rural credits that will enable farmers to borrow money at the lowest possible rate of interest, and without any rake-off by other interests, or farming as a business will decline until landlordism and tenantry will become general.

The strongest argument in favor of an efficient rural credit system is its opponents.

### THE SMALL TRACTOR

For some years farmers operating on a large scale made use of heavy tractors drawing eight and ten plows. The practical utility of these large machines has been questioned, largely, perhaps, because too many farmers operating them did not have the necessary engineering skill to manage them properly. The small engine,





a small tractor will enable its manager to get along with less hired labor and enable him to prepare his land for seed at less expense than by the old method.

Farming, by the way, is becoming more and more of an engineering proposition which makes it possible for farmers to do more of their own work except when threshing the fall crop, filling the silo, etc., when they can arrange to exchange work.

The small tractor also can be used to furnish power for pumping water, grinding feed for the livestock and in many other ways made to relieve the drudgery of the farm.

Of course, the tractors wear out without reproducing after their own kind as horses do, neither do they produce fertility for the land; nevertheless when properly handled they serve a very useful purpose.

## Strawberries for North Dakota

H. O. Warner, N. D. Experiment Station

Strawberries of excellent quality can be grown for home use and the local market, in North Dakota. They prefer a well-drained soil that is supplied with abundant moisture, but if well cared for they will produce a crop on almost any soil. Young plants should be set out in the early spring at a distance of about 2 by 4 feet. Be sure to set the plants with the crown of the plant on the level of the surface of the soil, not below the surface

As the young plants start to grow in the spring most of the mulch should be raked off the rows and left between the rows. In case there is danger of a later spring frost, the blossoms often may be protected from it, by raking the loose straw over the rows. Commercially strawberry beds are seldom run more than three years. In a home garden a bed can be run for four or five years. When running a bed this long it is well to go along

perfect flowers that have only the pistil or female organ, and which will not produce fruit, unless pollen from some perfect flowers is carried to them. All plants of the same variety have the same kind of flowers. So in selecting the varieties to plant be sure that you have varieties with perfect flowers or that you plant some plants of perfect flowered varieties near those with imperfect flowers. All good nursery catalogues state whether the varieties are perfect or imperfect.

Varieties of strawberries that are at the present standard in North Dakota are Senator Dunlap, Glen Mary, Bederwood and Lovett.

Everbearing or fall bearing strawberries are being grown quite successfully in North Dakota. To grow them successfully—use a soil that is quite damp during the late summer and early fall or plant them where they can frequently be watered in late summer. The blossoms should be pinched off till early July when they should be allowed to set fruit. If protected from the early fall frost they will produce a goodly amount of strawberries during the early fall. Two good varieties of this class are the Progressive and Americus.



For Years Strawberries have Proved a Success at the Experiment Station.

(where it will rot) and not above the surface (where it will dry out). The roots should be cut back to two or three inches and should be well spread out in planting. Constant cultivation should be given the plants the first year. In the fall, immediately after the ground is frozen a mulch of straw should be spread over the entire bed so that the straw will be about two inches deep after settling.

the row and plow under the old plants leaving a row about one foot wide composed of young plants which are found along the side of the original row. In starting a new strawberry bed always select the strongest young plants of the old bed.

Strawberry plants have two kinds of flowers, perfect flowers—having both the male and female flower organs which will produce fruit—and im-

## PREPARE FOR ALFALFA

W. C. Palmer, N. D. Exp. Station

The securing of a good stand of alfalfa requires preparation. The soil should be deeply plowed yet packed quite firm, and the freer from weeds the better. Corn or potatoes are the best crops to precede alfalfa. The alfalfa will make the best stand when sown alone. If it is sown in rows, one row of alfalfa can be sown and five rows of grain and so on. Good stands of alfalfa have been secured in this way on the North Dakota Demonstration Farms. These trials have not covered any very dry years.

When sown in 30-inch rows one pound of seed per acre has been sufficient to give a good stand. When sown in rows 6 inches apart 5 pounds of seed will make a good stand. Part of the alfalfa preparation should be the securing of a hardy seed. Grimm has proved the hardiest of the blue flowered varieties. It is a good hay producer and seeds well. Inoculation is important. One way is to secure some soil from a field that has grown alfalfa and sow on the field where the alfalfa is sown. Another way is to use a culture which can be secured from the U. S. Department of Agriculture or from seed houses.





# 20 Fall Bearing Strawberry Plants FREE!

- - and the Latest Book on Fallbearing Strawberries

This entire collection of Twenty Plants, and the New Book, \$500 AN ACRE from FALLBEARING STRAWBERRIES will positively be sent FREE and POSTPAID to every reader who takes advantage of our Special Offer. The Plants will be sent at the right time to set out in the Fall.

The Twenty FREE Plants are made up in the following assortment only, and cannot be changed, as to varieties.

**5 Superb** (Perfect). The best and most profitable of the Fallbearing sorts also yielding good crops in June, after fruiting the previous Fall. Plants are strong, and stand the winter well, after producing a heavy crop of fruit from about August 15 to November 15.

**5 Progressive** (Perfect). Not so large as the Superb, but of the choicest Quality, and an immense yielder. Fruit bright red and smooth. The plants are vigorous and healthy, much like the Dunlap. Blooms well protected by foliage and give good long pickings.

**5 Americus** (Perfect). Plants are fine growers and they produce abundantly. Berries are medium to large in size, of regular shape and very beautiful. The fruit is of the finest flavor, and a favorite everywhere. One of the most profitable of the Fallbearing Varieties.

**5 Unnamed \$1000 Hybrids** Single specimens of New Varieties, as yet unnamed, which have shown great promise, and upon the introducers place a high valuation. They are offered for trial and experimentation. From these valuable Hybrids YOU may develop some valuable new varieties of Fallbearing Strawberries.

The Twenty Plants, carefully packed in moss, will be sent to you direct from one of the largest nurseries in the United States, in time to set out in the Fall. They will bear lots of choice fruit next Fall, and you will have hundreds of plants to set out and to sell.

## Send Coupon Today ➡

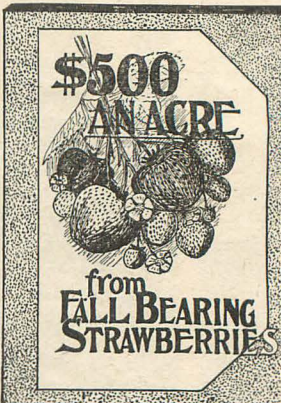
Remember, The Twenty Plants, and the New Book are sent absolutely FREE AND POSTPAID, as a premium with

2-Year Subscription to  
**North Dakota Farmer**  
at \$1.00

## Make \$500.00 an Acre This FREE Book Tells How

This booklet is given FREE with the Twenty FREE Plants, and contains the most up-to-date information on growing and propagating the Fallbearing Strawberry. You can make these Twenty Free Plants form the foundation of a profitable business by setting them out as a "Propagating Bed" and raising hundreds of plants for future planting and for sale. The Booklet tells you how to do it. It tells you how to Prepare and Fertilize the Soil, how to set out the Plants, how to obtain the most plants from each of the Twenty FREE Plants, how to Grow Berries of the Choicest Quality, and how to Set out a Commercial Plantation. If you are interested in Fallbearing Strawberries, you need this book, and you can get it, with the Twenty FREE Plants by simply taking advantage NOW, of our liberal subscription offer.

JUST SEND \$1 for 2 years subscription to the North Dakota Farmer and the Twenty Plants will be sent to you, FREE AND POSTPAID, in time for planting this Fall, together with the Book. BUT DON'T DELAY. The Supply of plants is limited, and no more can be obtained on this Liberal Offer after our supply is exhausted. Send the coupon today to **NORTH DAKOTA FARMER, LISBON, N. D.**



## FREE Fallbearing Strawberry Plants

FREE AND POSTPAID

Gentlemen:—Please send me, in time for planting this Fall, your collection of Fallbearing Strawberry Plants, as follows: 5 Superb, 5 Progressive, 5 Americus, 5 Unnamed \$1000 Hybrids, and a copy of the New Book, \$500 AN ACRE from FALLBEARING STRAWBERRIES.

I am enclosing \$1.00 to pay for two years subscription to North Dakota Farmer, Lisbon, N. D.

Please state whether New ( ) or Renewal ( ).

Name.....

Local Address.....

Post Office..... State.....



# Herd Building

Geo. P. Grout, A. C. 1908, M. S. in  
Animal Husbandry

**T**O those who already have a successful working dairy, there may be no need of talking improvement, altho none of us have begun to reach the limit of possibilities in live stock husbandry. It requires ability in the line of selection to start a herd but it takes constant thought and vigilance to keep it up to standard. With the best bred stock there is always a tendency toward reversion to a former inferior type, and unless one has ability to see and select the best, a good herd will not long remain excellent. In my days of less experience I used to think that extra good stock might likely be found in almost any herd and therefore it was poor policy to buy foundation animals of experts as their price would be prohibitive. I have now learned by experience that a man who does not know and appreciate good stock when he sees it, can not breed fine stuff. He may breed one or two by chance, but while chance may produce a wonderful freak, it never fixed a good, uniform, useful, type.

In the selection of good foundation stock it is well to purchase as good animals as one's pocket-book will warrant and from a breeder who knows his business. It is also a good plan to purchase in families. A good animal belonging to an excellent line thru both sire and dam is better than an excellent individual of plain family breeding or of breeding that has never given results. To illustrate points to be sought in the selection of good foundation stock, I have asked for this cow to use in demonstrating dairy form.

There are good individuals in all breeds and excellent producing families among all scientifically bred dairy cattle. The breed that you like the best, that prospers under your local conditions, and flourishes under your care is the breed for you to keep. If you like stock and as a breed they do well for you it is poor policy to make a change even tho some other man has obtained better results with another breed. If you are not reasonably successful, you had better look to yourself and see where the trouble lies. You may find some minute detail which alone stands between your herd and success.

## Points of the Dairy Breeds

Purpose of these animals to convert

Special Strawberry Premium, Page 6

roughage into salable products. In short, a machine.

### 1. Capacity:

- a. Length (from shoulder to hook joint)
- b. Breadth (with rather straight but well spread ribs)
- c. Depth (thru the middle)

### 2. Angularity of form, or Dairy Temperament:

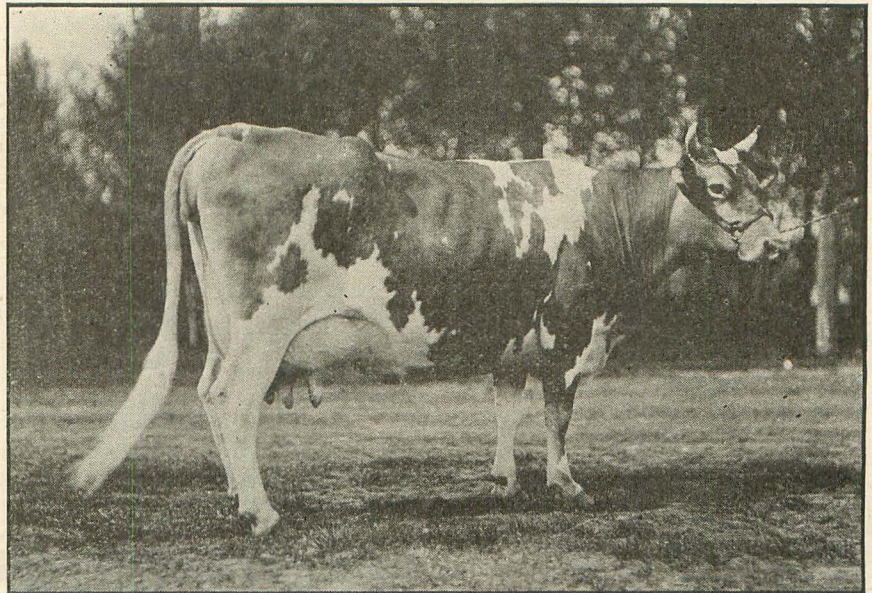
- a. Withers sharp and shoulders spare.
- b. Spinal column—prominent and rugged, extending high thru loin.

- b. Typical Head.
- c. Size for the breed.

### 5. Constitution:

- a. Width, deep chest, and full in the region of the heart.
- b. Muzzle broad, nostrils open, jaws, strong, and bright eye not too open.
- c. Abdominal wall around the naval strong, resisting pressure.

When you have made your choice of breeds and have selected a foundation herd, either grade or pure bred, put all your ability and a good amount of cash into the selection of a good sire. The best your pocket book will afford is none too good. So much has been said and written on the subject of good sires that more and more breeders have come to realize the worth of a truly great bull. Since a boy, I have always been an admirer of a great sire. It has been



Lime Girl (A. R.); Guernsey, Weight 1360 lbs., Record 729 lbs. fat, Class B.  
Owned and developed by Jean Du Luth Farm

- c. Rump—high, strong and sharp denoting strength and nervous temperament.
- d. Neck—light, rather long.
- e. Hook points—sharp, low, and pin bones far apart.
- f. Thighs—spare.
3. Mammary Organs:
  - a. Udder—large, skin hanging in folds, well balanced being attached well forward and high behind (level sole, not pendulous).
  - b. Milk Wells—large orifices and numerous.
  - c. Veins—long, large, branched and crooked, with extensions.
4. Breed Characteristics:
  - a. Color of coat.

my dream since childhood to some day breed a great animal. In early life my hopes ran high that I might breed a great stallion, but as modern methods of travel largely ignore the horse, I have dropped the idea of horse breeding. I would rather have it said of me that I bred a great sire and had the good judgment to keep him in service than to have it said that I had bred a string of World's Champions. To me the sire is important and I only wish it possible to fully express my views on the subject.

The sire is more than half the herd either for good or bad results, but the great sires in any breed can almost be counted on your fingers. The great dairy sire will breed good cows out of



almost any dam. You may have noticed it, but in every breed there are one or two sires that stand out like lone stars in the heavens. Modern dairy methods of record keeping and the popularity of official testing have made it much easier to select a good sire, but all do not take advantage of the information given by the scales and Babcock test. Agricultural papers and Farmer's Institute workers very properly advocate the use of bulls out of tested dams whose records are high.

This method of selection on high production thru the bull's dam is in itself, an assurance of a high degree of merit and should be the dairy cattle breeder's "chart and compass" to clearly point the way to better livestock husbandry; but to obtain highest results, individuality, long time records, and family blood lines should also be given much weight, Hardiness, medium to good size, strong constitution, correct type for the breed, good production in the near relatives and immediate family, together with high quality. These points should be sought in a good sire.

Personally, I believe as strongly in the old adage, "Breed not so much to the winner as to the way the winner was bred." If it is possible to breed from record stock and also from family lines of high production, so much the better, but this can not always be done. To do good constructive breeding requires ability, time, patience, and a tenacity of purpose.

With the beginner in livestock improvement, especially in grade herds, the temptation is great to switch breeds or sires every time some enthusiastic breeder demonstrates the superiority of a certain individual within a breed. If you have traveled among farmers in different localities, you know how hard it is to find a flock of chickens in a barnyard that are all the same breed, and uniform in type. For a while barred Plymouth Rocks will be used and when it is found that the neighbors' hens of White Leghorn blood do not bother so much about setting in mid-summer the farmer makes up his mind to gradually work into the breed and gets one or two pure bred hens and a

few roosters. These are used on the Rocks, are kept for the time being but before a complete change has been brought about, it is found that the Leghorn type are wild and give no returns in meat and as the flock is pretty well mixed it is decided to try a third breed, and so it goes. No matter how poor a farmer may be, if he keeps chickens at all there is no earthly excuse for not having a uniform flock. Any one who has a mixed lot of chickens for more than one season, has them because he is a scrub breeder, with little tenacity of purpose and because he prefers having scrubs to making a little effort in getting a uniform type.

After the grasshoppers cleaned us out in Southern Minnesota, as a family we were about as poor as the poorest family in Minnesota today and I know from actual experience that poverty does not make it necessary to breed scrubs. The necessity is only in the owner's mind. I know it as I have been thru the mill. We are all changeable, the small farmer and the large breeder as well. Tenacity of purpose is what we lack. The small farmer can not stick to one breed and the large breeder can not stick to a single sire until he has made a success with him. You say, "Yes and you are as bad as the rest of us as you had a great bull and let him go, because you got a record price." You refer to May King but strange as it may sound to you if we had kept May King of Linda Vista we would have been switching from our original purpose. We got him to breed to Starlight's Fern to raise a bull, combining the blood of May Rose

and Starlight's Excelsior. When the bull from Starlight's Fern was born we had all the points we had hoped to get in Starlight's Excelsior of Jean Du Luth but May King proved better than we had expected and it was hard to let him go. Our herd is comparatively small and we could not use both May King and his son which we had constructively bred. It is evident in the blending of the May Rose and Starlight blood we had developed the nicks for which we were looking. We have stuck to our purpose altho some hinted that we might be going out of the Guernsey business because we had sold May King. We understand that in class discussions at the University of Wisconsin they wondered that we should sell the bull at any price.

We are not selling out, we are not switching, nor are we letting down our high standard if we know it. We are blending the May Rose and Starlight blood and introducing the May Rose crosses on a Starlight and mixed

## DURUM WHEAT WANTED

We are in the market for a few cars of choice

### DURUM WHEAT also MILLET SEED

in either car lots or small shipments. Mail samples for our bid.

**FARGO SEED HOUSE**

Fargo,

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## "PREPAREDNESS" OVERHAUL YOUR AUTOMOBILE NOW

Get ready for the Spring business. We can give you service in this line, as well as others, for we have expert Welders, Machinists and Mechanics who with our equipment are able to accomplish the most difficult jobs. We rebore motor car and gas engine Cylinders and fit them with larger pistons and rings. We use the very best of material that can be had. Auto Metal Bodies and trailers built, write for prices.

DAKOTA WELDING AND MANUFACTURING CO.,

Telephone 926. 203-5th St. N. FARGO, N. DAK.



foundation of Family blood lines. We shall follow May King and his son with a grandson, Golden Noble of the Lakes, introducing five May Rose Crosses, two new ones thru Golden Noble II. which we considered second only to the peerless May Rose King.

This brings us to the important point in breeding. Make your selection of the breed you wish to breed and do not cross breed. If a breeder can not cross families within a breed without danger, how can the farmer expect to cross two distinct breeds without absolute disaster. Do not in-breed but keep to one breed and work along family lines. If you wish to develop some character in your herd which you do not have, do not attempt to introduce it by cross breeding. Keep within your breed and select a mating having some of the qualities desired. If the same foundation blood lines with their proper "nicks" are found in your foundation herd and the out-cross introduced, you are quite likely to find that the progeny of this combination will be superior to either of the parent stock.

This is constructive breeding and it may be carried on in building a profitable grade herd as well as with a high class pure bred herd. In every successful herd building operation, there are certain "nicks" which blended with a base blood line give results. There seems to be no method of determining these affinities only by experiment and thru careful selection of producing combinations which carry the base or foundation family lines. By way of illustration take the production of speed in the American Trotting horse. It was found that a Wilkes horse crossed on a Mambrino, Patchen, or Nutwood gave speed, other lines nicked as well but this illustration served our purpose. There are nicks in every line of animal breeding if we are but keen enough to find them. For convenience, if you like, you can call it a positive and negative cross. The results seem to be like a current of electricity when you get the proper combination. I believe one very good reason why world's record stock do not always produce world's Champions is because the nicks in the Champion's blood lines are so perfectly balanced to obtain these high results that the next cross throws out the affinity and unless we can find an equally well bred and balanced pedigree in the animal mated, and of practically the same blood lines, coming down thru not too closely related stock, we can not look for as high results in the progeny as we obtain in the immediate ancestors.

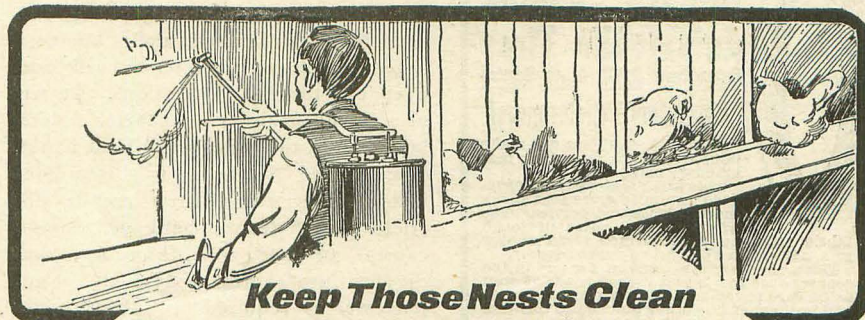
My article is not addressed to expert livestock breeders but to farmers who

are breeding good producing, commercial herds, and you can use the same principles.

To sum up the whole matter, let us choose our breed and stick to it. If improvement is needed introduce it from superior animals of the same breed and from closely related families. Do not cross breed only to get a start and then keep building on the same foundation.

## WHAT RURAL CREDITS LAW WILL DO

There is, in the form of a communication to the Atlanta Constitution of recent date, what laymen generally have been desirous of obtaining, and heretofore have not obtained, namely, the opinion of one well versed in financial law and banking affairs as to the value of the rural credits measure,



### Keep Those Nests Clean

Mites, scaly leg and germs of roup, canker, white diarrhea and other diseases lurk unseen and unsuspected in the straw or shavings. Neglect may be the cause of infection wiping out your flock. Prevent the entrance and spread of disease by sprinkling the nests with

## CARBOLA

The Disinfecting White Paint

Guaranteed harmless to the birds yet is 20 times stronger than carbolic acid in the destruction of germs. Comes in powder form. As a paint for the walls, ceilings and floors of poultry houses, cellars, dairies, barns and other places it is unequalled. Just mix with water and put on with brush or sprayer. Will paint any surface a beautiful snow-white and disinfect the premises in one operation. Will not taint food products of any kind.

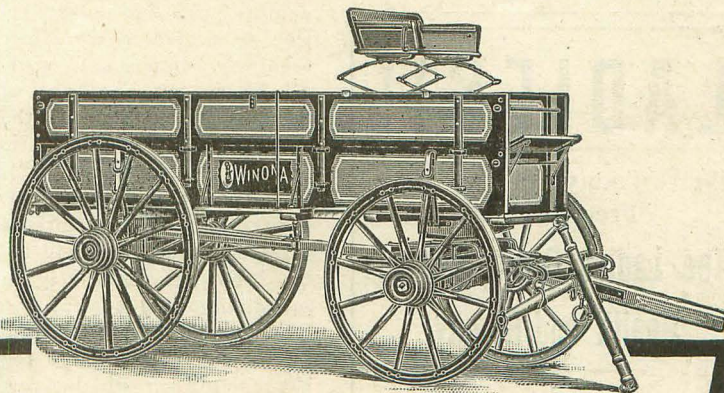
### Use It Instead of Whitewash

Will never flake, peel or blister. Adheres to wood, stone, brick or cement. Get it from your dealer. If he will not supply you send his name and your order to us.

10 lbs. (10 gals.) for \$1 and postage. 20 lbs. (20 gals.) for \$2 delivered free. 50 lbs. (50 gals.) for \$4 delivered free.

A trial package, enough to paint and disinfect 250 square feet, from your dealer or sent by parcel post for 25 cents.

CARBOLA CHEMICAL CO., DEPT. J 7 EAST 42d ST., NEW YORK CITY



## The Wagon that's Built for Service

WINONA Wagons are built to make good in hard, steady road and field use. Extra strong where extra strength is needed. Made from "bone dry", time seasoned oak and hickory, ironed "for keeps."

### WINONA FARM WAGONS

OUTER bearing axles prevent breakdowns. Clipped gears, strongest wheels in the world. Bent, double-riveted Felloes. Strongest Skeins, Poles and Hounds. Substantial extra cleated Boxes. Durable painting.

Write for Catalog F showing different styles of Winona Wagons with details of their unequalled construction.

WINONA WAGON COMPANY, Winona, Minn.



now being considered by conference committees of Congress, as a workable proposition. The communication in question is published over the signature of Hollins N. Randolph, attorney for the federal reserve bank of the Atlanta district. It appears that the differences between the two houses

at Washington, upon the adjustment of which the bill will go to the President for his signature, are not fundamental. Such changes as may be made will have to do with details of operation.

Enactment of the law will create a federal farm loan board at Washington the members of which, appointed by the President, are to hold office for nine years. This board will exercise supervision and authority over federal land banks and their business, much as the central reserve bank does over the district institutions. It will also have authority to charter federal land banks and joint stock land banks. The United States is to be divided into twelve federal rural credits districts. Each federal bank will have a capital of not less than \$750,000, divided into shares of \$5 each. Each borrower is required to subscribe for stock to the extent of 5 per cent of his loan. Application for loans will be addressed to the local national farm loan association. Ample provision is made for appraisal of property upon which loans may be sought. Loans will be limited to sums not over \$10,000 to any one person, secured by first mortgage on lands actually cultivated, at an appraisal value of not exceeding 60 per cent.

The general plans for organization and procedure do not appear to Mr. Randolph so complicated as they apparently have seemed to others; much less is he inclined to doubt the smoothness with which the system, in actual dealings with borrowers and debtors, can be operated. In addition to providing what he calls "exceedingly simple and workable legal machinery in the shape of national farm loan associations," the bill also provides for the organization of one or more "joint stock land banks" in each district, with minimum capital of \$250,000. These institutions are to be privately owned, but will be organized by, and be exclusively under the jurisdiction and control of, the farm loan board, as the present national banks are organized and regulated by the comptroller of the currency and the federal reserve board.

So simple is the bill, according to Mr. Randolph, that its machinery can be set in motion in a very short time after it becomes law. "The worthy among the vast army of our citizens possessed of lands of adequate value—and the provisions of the bill in this regard are liberal enough—will shortly," he says, "be able to secure extensions of money credits on the same basis as to rates, expense, etc., accorded merchants by the commercial banks."

Fallbearing Strawberries. See Page 6

This is the end long sought by the farming population. They never have been able to understand why they should be discriminated against by bankers, as they have always been and as they are today. If the rural credits law places them on an equality with other borrowers they will ask no more. This, Mr. Randolph is satisfied, the law now awaiting final action will do.—Christian Science Monitor.

## Caught 51 Rats One week

Trap resets itself; 22 inches high; will last for years. Can't get out of order; weighs 7 pounds. Twelve rats caught one day. Cheese is used doing away with poisons. The trap does its work and never fails and is always ready for the next rat. When rats and mice pass the device they die. Rats are disease carriers; also cause fires. These Catchers should be in every school house. Rat Catcher sent prepaid on receipt of \$3. Mouse Catcher, 10 inches high, \$1. Money back if not satisfied.

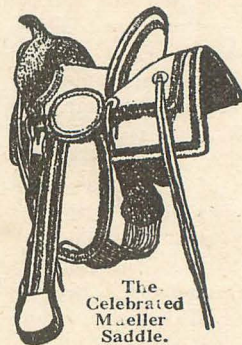
H. D. SWARTZ  
Inventor and Manufacturer  
Universal Rat and Mouse Traps  
Box 566 : : : Scranton, Pa.

## MINNESOTA FARM FOR SALE

160 acres good clay loam land 3 miles from Leonard, Beltrami County, Minnesota. On state road, 1 mile to school and church. 40 acres under cultivation, balance fenced for pasture. House, barn, granary and other buildings in good condition. Scandinavian settlement. A bargain at \$30 per acre on easy terms. Write for particulars to

CLAYTON C. CROSS,  
18 Markham Bldg., Bemidji, Minn.

## A \$45 Saddle, \$36 Cash



The Celebrated Mueller Saddle.

Our latest Swell Fork Saddle, 14-inch swell front, 28-in. wool-lined skirt, 3-in. stirrup leather, rig, made of best oak leather, guaranteed beef hide covered solid steel fork.

### THE FRED MUELLER

Saddle & Harness Co., Dept. R. 1413-15-17 Larimer St. Denver, Colo. Send in your name for our catalogue now ready.

## READ THIS

There must be a reason why there is such a demand for Justin's Boots. If you are going to wear boots, why not wear the best? Yours for the Best Cowboy Boots Made. Send us your address on a postal card and we will send you our catalogue, and self-measuring system.

GIVE US A TRIAL

H. J. JUSTIN & SONS  
Mfrs. of Justin's Celebrated Cowboy Boots. NOCONA, TEXAS



## For Greatest Satisfaction Use DOUBLE SERVICE Automobile Tires

Guaranteed 7,000 Miles Service

### Absolutely Punctureproof

Double Service Tires are made double the thickness of the best standard make tires.

This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough fabric and one inch surface tread rubber makes these tires absolutely punctureproof.

These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War Service.

Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

### PRICES

Tires Tubes		Tires Tubes	
30x3 in.	\$ 8.60 \$2.30	36x4 in.	\$17.45 \$4.65
32x3 1/2 in.	10.85 3.10	35x4 1/2 in.	21.20 5.60
32x3 1/2 in.	12.75 3.20	36x4 1/2 in.	22.60 5.75
33x4 in.	15.75 4.20	37x4 1/2 in.	23.60 6.20
34x4 in.	16.70 4.35	37x5 in.	26.30 6.60

All other sizes not included in above list also furnished. Non-skids at 10% additional.

Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Descriptive folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O. Dept.



## LADIES!!

Write Today For Our New Free Booklet

## The Ladies Cyclopedia of Health and Beauty.

Let us tell you how to eradicate wrinkles, pimples and other facial blemishes and restore the fresh complexion and contour of girlhood. We send this book to you Free for your name and address.

## The Peerless Toilet Supply Co.

Bismarck : : N. Dak.



## GOVERNMENT CROP REPORT

A summary of the July crop report for the State of North Dakota and for the United States, as compiled by the Bureau of Crop Estimates (and transmitted thru the Weather Bureau), U. S. Department of Agriculture, is as follows:

## Corn

State: July 1 forecast, 9,190,000 bushels; production last year, final estimate, 9,800,000 bushels.

United States: July 1 forecast, 2,870,000,000 bushels; production last year, final estimate, 3,054,535,000 bushels.

## All Wheat

State: July 1 forecast, 90,600,000 bushels; production last year, final estimate, 151,970,000 bushels.

United States: July 1 forecast, 759,000,000 bushels; production last year, final estimate, 1,011,505,000 bushels.

## Oats

State: July 1 forecast, 77,200,000 bushels; production last year, final estimate, 98,000,000 bushels.

United States: July 1 forecast, 1,320,000,000 bushels; production last year, final estimate, 1,540,362,000 bushels.

## Barley

State: July 1 forecast, 38,200,000 bushels; production last year, final estimate, 44,800,000 bushels.

United States: July 1 forecast, 206,000,000 bushels; production last year, final estimate, 237,009,000 bushels.

## Rye

State: July 1 forecast, 3,080,000 bushels; production last year, final estimate, 2,700,000 bushels.

United States: July 1 forecast, 44,000,000 bushels; production last year, final estimate, 49,190,000 bushels.

## Flaxseed

State: July 1 forecast, 7,120,000 bushels; production last year, final estimate, 6,534,000 bushels.

United States: July 1 forecast, 14,500,000 bushels; production last year, final estimate, 13,845,000 bushels.

## Potatoes

State: July 1 forecast, 8,300,000 bushels; production last year, final estimate, 7,200,000 bushels.

United States: July 1 forecast, 369,000,000 bushels; production last year, final estimate, 359,103,000 bushels.

## Hay

State: July 1 condition 93, compared with the eight-year average of 84.

United States: July 1 condition 93.4, compared with the eight-year average of 82.2.

## Prices

The first price given below is the

average on July 1 this year, and the second the average on July 1 last year.

State: Wheat, 94 and 115 cents per bushel. Corn, 79 and 63. Oats, 31 and 40. Potatoes, 74 and 44. Hay, \$7.40 and \$6.10 per ton. Eggs, 16 and 15 cents per dozen.

United States: Wheat, 92.9 and 102.8 cents per bushel. Corn, 75.4 and 77.7 cents. Oats 40.5 and 46.7 cents. Potatoes, 102. and 52.1 cents. Hay, \$12.10 and \$11.70 per ton. Cotton, 12.5 and 8.6 cents per pound. Eggs, 19.7 and 16.8 cents per dozen.



## The Wheat Yield Tells the Story

### of Western Canada's Rapid Progress

The heavy crops in Western Canada have caused new records to be made in the handling of grains by railroads. For while the movement of these heavy shipments has been wonderfully rapid, the resources of the different roads, despite enlarged equipments and increased facilities, have been strained as never before, and previous records have thus been broken in all directions. The largest Canadian wheat shipments through New York ever known are reported for the period up to October 15th, upwards of four and a quarter million bushels being exported in less than six weeks, and this was but the overflow of shipments to Montreal, through which point shipments were much larger than to New York.

Yields as high as 60 bushels of wheat per acre are reported from all parts of the country; while yields of 45 bushels per acre are common. Thousands of American farmers have taken part in this wonderful production. Land prices are still low and free homestead lands are easily secured in good localities, convenient to churches, schools, markets, railways, etc. There is no war tax on land and no conscription. Write for illustrated pamphlet, reduced railroad rates and other information to

**W. E. BLACK**  
 Clifford Block Grand Forks, N. D.  
 Canadian Government Agent.

NO PASSPORTS ARE NECESSARY TO ENTER CANADA

## Reboring and Grinding of Cylinders

This is the time to fit up your steam engines and gas tractors for the coming season

We can rebores and grind your cylinders, fit new oversize pistons and rings, make and fit new crank pins, straighten shafts, bore and bush gears and clutches or do any kind of machine work. Refue boilers and replace stay bolts. We carry in stock all sizes of stay bolts, patch bolts, bracket bolts, rivets, boiler flues, stay-bolt taps and boiler taps, shafting, shaft hangers, cast iron pulleys, woodsplit pulleys. Write and let us quote prices on any work you have.

**Craig Brothers, Fargo, N. D.**

P. O. Box 295. - - - - Telephone 554 W.

## NORTH DAKOTA SCHOOL LAW

For the first time since 1911 has the State published a volume of the School Laws, and not until 1919 will another edition be printed by the State.

### WOULD YOU KNOW

For what reasons a pupil may be suspended or expelled?  
 Whether one is allowed to read the Bible in school?  
 What branches must be taught every day?  
 For what purposes the school house may be used?  
 Who may vote on school matters and what are the voters' qualifications?  
 How schools may be consolidated?  
 What recourse one has if he is not satisfied with the ratings of the examining board?  
 Whether free text-books may be adopted without a vote?  
 What to do when a pupil or parent disturbs the school?  
 What provision is now made for transportation of pupils?  
 How pupils may be compelled to attend school?  
 Whether children may be employed in stores and factories?  
 How a certificate may be revoked?  
 What the law is regarding drinking cups, fire escapes, hitching posts, school libraries, pension fund, accredited diplomas, etc.?

THEN ORDER A COPY OF THE LATEST SCHOOL LAWS  
 Price, post paid, 30 cents.

**W. G. Crocker,**

**Lisbon, North Dakota**



# North Dakota Farmer

Entered as second class matter in the postoffice at  
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**Vol. 18**      **JULY, 1916**      **No 1**

Nature is the written thought of  
God.

"The cow is a great institution. She  
beats wheat."

Our exports of horses and mules  
during 1915 amounted to \$77,000,000.

No use to waste time and feed on  
poor cows. It pays to test the milk  
and weed out all star boards.

A ton of butter carries away but  
six cents from the farm fertility, while  
selling the feed required to produce the  
ton carries away \$375.67.

Farmers should not meddle with  
the business of other interests. By  
the same token other interests should  
not meddle with the farmers' business.

A bit of land-scape gardening on  
every farm would add to its material  
value and greatly improve the face of  
nature in every section of the country-  
side.

Thrift should be as thoroly taught  
in every public school as the multipli-  
cation table—not theoretically alone  
but practically—by means of a chil-  
dren's saving bank.

Farming is a man's job. To get all  
out of the land it is capable of pro-  
ducing without impairing its fertility  
requires more tact and brains than is  
needed to manage a store or bank,  
yet too many are of the opinion that  
anybody can farm.

Diversification is the biggest single  
factor in soil rejuvenation and main-  
tenance; in the eradication and pre-  
vention of soil and crop pests; in in-  
surance against much of the loss and

vicissitudes of uncertain seasons,  
weather and markets.—Harris.

The shrewd banker will lend money  
without much bantering to the farmer  
that would purchase livestock or any-  
thing else of a productive sort where  
he would hesitate or refuse to loan  
money for the purchase of a piano or  
automobile, for pleasure. Moreover  
he would not have to be over-  
shrewd to make this difference.

The young men graduates of the  
Agricultural College who are engaged  
as instructors in agriculture in the  
consolidated and high schools are ren-  
dering a better service to the state  
than if they were to become farmers  
on their own account. The girl grad-  
uates who teach household economics  
are also rendering commendable ser-  
vice to the commonwealth.

The consolidated rural school should  
be made the center for the dissemi-  
nation of agricultural information for  
the benefit of the boys that naturally  
should be looking toward farming as  
their future occupation. A great agri-  
cultural commonwealth cannot afford  
to neglect a single opportunity to thus  
fortify its chief industry.

Laws enacted requiring livestock to  
be inspected for tuberculosis or their  
fitness for breeding purposes are  
proper enough. Such laws are in-  
tended to protect the public. The  
losses, however, should not fall en-  
tirely upon the innocent but unfor-  
tunate farmer. The public thus pro-  
tected should help to bear the losses,  
if not bear them entirely.

Argentina has over 25,000 miles of  
well equipped and well-operated rail-  
roads. Uruguay has eight head of  
cattle and more than twenty sheep for  
every man, woman and child in that  
little country. In 1912-1913 Argen-  
tina supplied more than half the corn-  
entering the international trade of the  
world—her exports of corn in 1913  
were greater than all other corn-ex-  
porting countries combined.

"It takes money to buy or run a  
farm. Like other business men, the  
farmer must borrow capital to operate  
successfully. A banking system de-  
vised for the banker and merchant  
makes it impossible for the average  
farmer to prosper as a borrower—  
from which has grown the demand for  
better credit facilities. Farmers are  
not asking Wall Street to finance

them. All they want is the use of  
their own money on fair terms—the  
farm-made surplus for those who need  
it."

In all our northwestern states the  
farmers' vote is sufficient to elect two  
thirds of the legislative candidates.  
If they would take time enough from  
their work and cut out their suspicion  
or jealousy of each other they could  
have just such laws as they desire.  
If they, on the other hand, permit  
other interests to divide their strength  
and pass laws inimical to their welfare  
or refuse to pass such laws as they  
desire, they have only themselves to  
blame. Kicking under such circum-  
stances comes with poor grace.

Why not comply with the law  
passed by the last Legislative Assem-  
bly and name your farm and have  
the name registered.

## REFILLING THE SILO WITH DRY CORN FODDER

Editor, N. D. Farmer;  
Dear Sir:

We are writing for information rela-  
tive to refilling the silo with corn  
stalks or shock corn by adding water  
sufficient to substitute the moisture  
lost in the fodder.

Some farmers are putting dry corn  
stalks in the silo with excellent re-  
sults. This practice will make it pos-  
sible to fill the silo several times dur-  
ing the winter. The corn stalks,  
otherwise wasted, are in this way con-  
verted into good feed.

P. G. Holden, Director, I. H. C.

## Answer

Wherever tried, so far as we have  
learned, dry corn stalks make a fair to  
good quality of ensilage, provided  
about an equal weight of water is  
added. Care should be taken, how-  
ever, to add the right amount of  
water, which can readily be deter-  
mined when the fodder is cut up for  
the silo, and that the material be  
thoroly tamped so that the air will be  
practically excluded. Perhaps it will  
require more than an equal weight of  
water to reduce the corn stalks to  
about the condition the corn would be  
in when cut up at about the roasting-  
ear stage.

It would be a good plan for farmers  
to make experiments with dry corn  
stalks and report the result for the  
benefit of others. If dry corn stalks  
can be used successfully for making a  
good quality of ensilage there will be  
great saving in the building of silos,  
or, rather, fewer silos will be needed  
on the farm, since a silo can be filled  
more than once a year.



# Livestock Department

## FARM AND STOCK NOTES N. J. Shepherd

Feed given to ungrowthy animals is largely thrown away.

Good grooming means keeping the animal's hair and coat clean and well brushed.

No animal is profitable at a standstill, keep all young animals growing and gaining.

In a majority of cases when everybody wants to sell is a good time to buy.

Thoro cultivation in good season will make up to some extent, the lack of fertility in the soil.

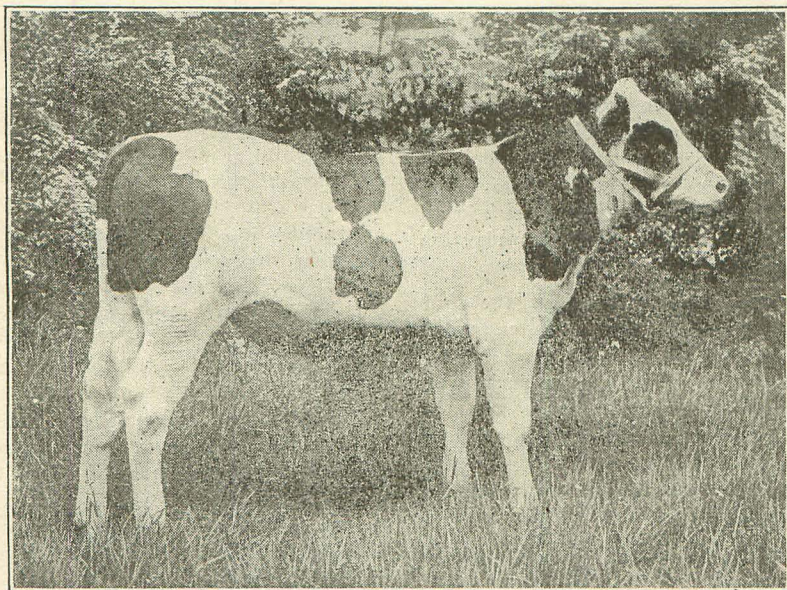
Kind treatment is essential in making stock contented and contentment is important with stock if they are to grow and fatten rapidly.

Blood, food, care and training are the requisites for producing a first class horse and the perfect horse is a product of all of them.

The longest and the finest wool and the heaviest fleeces grow on sheep which are well fed and are kept steadily in good condition.

With the dairy cow liberal feeding is required. This means that the cow must have as much wholesome nutritious food as she can eat and digest.

In order to find out just how much



**King Champion Rag Apple 17935**

Consigned to the Detroit Sale by Oliver Cabana, Jr., Elma Center, N. Y., and purchased for \$20,000 (the top price) by A. W. Green, Middlefield, Ohio. Born Nov. 5, 1915. Sire, Rag Apple Korndyke 8th 73416, the \$25,000 bull, grandson of Pontiac Korndyke thru both sire and dam (Pontiac Lady Korndyke, 38.03). Dam, Lady Pontiac Johanna 191984, world's record senior 3-year-old, 658.3 lbs. milk, 41,811 lbs. butter, 5.08% fat.

The markets should at all times be the guide, and their requirements the standard in sheep and wool growing.

Besides the profitableness of growing better animals there is always a better demand for such stock even when poor animals are unsalable.

Frequent stirring of the cream while ripening will largely obviate the difficulty so often experienced in having white specks in the butter.

The stability of any industry depends to a great extent on its profitableness and its profitableness depends, as a rule, on its management.

natural style a horse has in the carriage of his head, be sure to see him without a bridle before purchasing.

The most costly farming is generally done with poor teams. The horse that is only able to do a part of a day's work is an expensive animal on the farm.

The trained farmer must not only know how to make the soil produce abundantly, but he must know, also, how to manage all of the farm's processes and activities with economy.

In feeding, especially when rapid fattening is the object the animal

## CLASSIFIED ADS.

### One Cent a Word

Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word. TRY IT HERE.

## LIVE STOCK

**FOR SALE**—Improved Chester White Pigs from April litter, either sex; pedigree furnished. John F. Zimmerman, Davenport, N. D., Route 2.

**WORLD'S CHAMPION A. R. RED POLLS!**  
Minnesota Champion A. R. Guernseys  
Consistent Winners in the 1915 Show Ring  
20 of our foundation cows average 601.6 lbs. butterfat, official.  
Jean Du Luth Farm, Duluth, Minn.

**Pure bred Percheron Horses and Shorthorn Cattle Stock for sale.** Nels Knutson & Sons, R. 1, Fullerton, N. D.

**REGISTERED** Gurnsey bulls old enough for service. Also a few heifers for sale. FRANK W. RICHARDSON, Garden City, Minn., R. 1.

**CALVES. SHORTHORNS**, rich cherry red, HOLSTEIN, sharp black and white, GUERNSEYS, rich orange fawn with white markings. Few very choice grade calves marked as described above. Straight top line, heavy boned, hardy calves that make big type cattle. Write Edwin Howey, South St. Paul, Minn.

**Holstein, Guernsey and Shorthorn Calves.** A few extra good ones. Either sex. \$12.50 to \$35. Write Edwin Howey, South St. Paul, Minn., Station F.

**HOLSTEINS.** Beautifully Marked Holstein heifer and male calves, 15-16ths pure, 4 to 6 weeks old, \$20.00 each, crated for shipment anywhere. All from mature dams and heavy milkers, guaranteed. One car heifers a year old, \$45.00. Write or send order to Edgewood Farm, R. 10, Whitewater, Wis.

## ENVILLA STOCK FARM

Cogswell, N. D.

Will quote you special prices at any time on Angus Cattle, Feeding and Breeding Sheep, Shetland Ponies, Duroc Jersey Hogs, Wolf Hounds, Collies, Rat, Bird Dogs and other breeds, Angora Cats. All varieties of chickens, turkeys, geese, ducks, guineas, pheasants, rabbits, ferrets. Pets. Live Foxes, Skunks, Mink and Badgers.

## Bixby's Red Polls

My herd bull, J. D. Mefryweather, No. 24396, is the son of J. D. Millie, A. R. Grand Champion cow at Minnesota and Montana, in the 1915 show-ring and won the milk and butter contest with Guernseys, Jerseys and Brown Swiss competing with records of 600 pounds butterfat. J. D. Millie weighed 1280 pounds at thirty months old, and is full sister to the World's Champion two-year-old heifer. J. S. BIXBY, LISBON, N. DAK.

**POLAND CHINA** spring pigs from registered stock at reasonable price. Pedigree furnished. Also a registered boar one year old. J. Magnuson, Edinburg, N. Dak., R. 3.

**HOLSTEIN AND GUERNSEY HEIFER AND BULL CALVES.** Choice selected promising dairy calves, practically pure Holstein and pure Guernsey, but not registered, nice color. \$20.00 each, all express paid to any point in North Dakota and adjoining states. Order two, you will be so well pleased you will want more.—Meadow Glen Yards, Whitewater, Wis.

**FOR QUICK SALE**  
Crowded for range, am compelled to sell 40 head of mares and geldings. Address Patrick McDonnell, Ennis, Mont.

**CALVES.** Choice Shorthorns, Holsteins and Guernseys of either sex. Heavy-boned, straight-backed, hardy grade calves. Shipped by express at little cost. For particulars write Edwin Howey, South St. Paul, Minn.



**WOOL WANTED!** Highest prices! Honest grading and weighing. Don't sell till you get our price-list. A home concern. **Ohsman & Sons Co., Cedar Rapids, Iowa.**

PURE BRED

## Poland China

Pigs, April farrow. Both Sexes. Price \$10.00 each. From Mature Stock.

W. Arvidson, - Turtle Lake, North Dakota

### MISCELLANEOUS

**HOMESEEKERS!** For several years our Company has been locating contented people on its lands in AITKIN COUNTY. We can locate more. Send for maps describing this idea - dairy country. **ARNOLD, Land Agent, ROCK ISLAND RAILWAY, 107 Wolvin Bldg., DULUTH, MINN.**

**LEARN TO SPEAK IN PUBLIC.** We train men and women to be good public speakers. Money, position and prominence to be gained thru good platform work. Total cost is only \$5.00. We teach other things—send for outline. **Prin. W. C. Moore, New Egypt, N. J.**

**WANTED.** Live Foxes, Skunks, Mink and Badgers, any time. **Envilla Stock Farm, Cogswell, N. D.**

**WANTED** to hear from owner of good farm for sale. State cash price and description. **D. F. Bush, Minneapolis, Minn.**

**POWER FARMING.** The magazine of farming with mechanical power. Send 10 cents for three months' trial subscription. **Power Farming, Box C, St. Joseph, Mich.**

**WANTED:** To hear from owner of farm or unimproved land for sale. **O. K. Hawley, Baldwin, Wisconsin.**

**For Sale** 1914 Minnesota No. 13 and Northwest Dent seed corn, tests 97%. **Olson Bros., Milnor, N. Dak. R 3, Box 35.**

**WANTED—RESPONSIBLE REPRESENTATIVE.** 12 tools in 1. Sells to farmers, teamsters, contractors, etc. Lifts 3 tons, hoists, stretches wire, pulls posts. Many other uses. Free sample to active agents. One agent's profit \$45 in one day. Another \$1000 in Dec. We start you. Write for Big Color Plate. Secure exclusive sale. **HARRAH MFG. CO., Box M, Bloomfield, Ind.**

Farms and unimproved lands on easy terms. Real bargains in any state. Send for our free magazine. Services free to buyers. **Western Sales Agency, Minneapolis, Minn.**

**WANT TO BUY LAND?** Get in touch with our Company. Cut out the middleman. Maps. Prices. Literature. **Arnold, Land Com'r, 509 Wolvin Bldg., Duluth, Minn.**

**MISSOURI AUCTION SCHOOL**  
FREE CATALOG KANSAS CITY, MO.

## FOR SALE

Virginia farm containing 137 acre, nine room dwelling and out-buildings. Good meadow, growing timber. Convenient to school, church and post-office. Quarter mile from boat landing and cannery. Price reasonable, terms to suit purchaser. **M. BOYD, Palenville, N. Y.**

## Car Load Shetland Ponies

Imported and Home Bred. Mares Heavy in Foal. Some fine Shetland Stallions, Fillies, and Horse Colts. Must be sold at once.

**ENVILLA STOCK FARM**  
Cogswell, : : North Dakota

should be given the kind of feed which they relish and of which they will eat the largest quantity.

To make the best mutton, the animal should be made to grow rapidly and to mature as young as possible, and beyond everything else always be kept in prime condition.

A horse that is to be used for driving or riding should carry no more extra flesh than is essential to plump muscles and strength and should have sufficient exercise each day to harden its muscles and give it good wind.

Humus has been called the life of the soil. It not only improves the teeth and texture, absorbing and water-holding power of the soil, but controls in a large measure the supply of availability of every valuable element of plant food.

As a rule the cheapest pork is made from pigs that come in the early spring and are fed out in the late fall at about eight or nine months of age, while this requires good feeding yet it is nearly always profitable feeding.

The law of supply and demand, to a very considerable extent, determines the price of commodities; and every one should seek to bring the cost of each product below the selling price. Here is where all the profit lies and all must come to this basis in conducting a business on business principles.

Working to a purpose is the only way to succeed, and no one can work to a purpose who has not some system by which to work; and especially is this true of farming. There must be some system to guide in farm work or much time will be wasted and many things be done which had better be left undone.

The circumstances surrounding any industry are very largely to be regulated by those engaged in it. Much of the discouragement attending wool growing may be attributed to the management of the business more than anything else. Too many when the market begins to fluctuate become panicky and want to sell out when a little firmness or holding on would help materially in steadying prices.

Training will develop many good qualities in the horse which would otherwise be dormant and subdues many vicious habits and faults which would render the horse worthless if

allowed to go unchecked. The trainer and the training must both be judicious. Injudicious training will develop and even impart vices and faults to the horse which do not materially belong to its disposition, while the horse handled with kindness, care and judgment will usually be a safe, sure, obedient animal.

### ENORMOUS PROFITS POSSIBLE IN DAIRYING

The official announcement of the winners of the American Jersey Cattle Club Medal Awards for 1915, just published, shows the most successful year the Register of Merit Department has so far experienced, both in the number of records accepted and in the quality of them, and also shows the possibilities of dairying with the right kind of cows and the right kind of management.

Among the 1448 cows competing for honors in 1915, there stands out with dazzling brilliancy a new star in the Jersey firmament, the great cow Dosoris Park Lily. Dosoris Park Lily started her year's work on December 3, 1914, and produced in the following 365 days 16,728 lbs. of milk, containing 957.4 lbs. of butter-fat. This production was the highest record of the year, but on February 29, 1916, "Lily" earned the title of Grand Champion of 1915 when she dropped a live, vigorous heifer calf which had been carried 188 days of the test period.

Owned on an estate where sanitation is the paramount consideration, and the highest grade of milk the object, "Lily" was obliged to stand in a stanchion with her stable mates thruout the greater portion of the year, and receive the regular routine treatment followed in an establishment of this kind.

"Lily's" milk, being certified Jersey milk, sold for 20 cents a quart, and therefore the 16,728 lbs. of 5.72% milk was worth \$1,556.08. Valuing her entire grain ration at \$37 a ton, alfalfa hay at \$26 a ton, and silage at \$5 a ton, "Lily" returned a profit of \$1,357.16 over and above the cost of her feed, in spite of the high valuation placed on it. This return on her milk alone represents 5% interest on \$27,143.34. The heifer calf is valued

### BECOME A VETERINARIAN

Veterinarians are needed in North Dakota. The Indiana Veterinary College has many graduates in and eligible to the United States Government Service. Completely equipped laboratories, biological and chemical. Operating rooms furnished with the latest appliances. Conducted by practical veterinarians who are stock men. A firmly established institution with all the facilities for giving a young man a complete education in veterinary science. For catalogue No. 837 and information write to

INDIANA VETERINARY COLLEGE, INDIANAPOLIS, INDIANA



by its owners at \$2,000. The return on "Lily's" entire product for the lactation of 1914 to 1915 represents 5% interest on \$67,143.34.

Dosoris Park Lily was bred and is owned by the Estate of Charles Pratt, Glen Cove, New York.

#### EXPERIMENT STATION POINTERS

##### Ten-Year Old Alfalfa

In 1905 Grimm Alfalfa was sown at the Dickinson Sub-Station. The stand is good yet. There is no indication of the older plants having died.

A field of Grimm Alfalfa was also sown at the Edgeley Sub-Station the same year; it is still doing well and has shown no signs of winter killing.

##### A Pasture Test

A pasture at the Dickinson Sub-Station was seeded part to bromus and part to slender wheat grass. The brome grass was eaten quite close while the slender wheat grass had been eaten but little if any during the season.

##### Use Road Drag in Town

The country road is not the only one that will benefit from the use of the road drag. In several towns the streets are kept in condition by the use of the road drag. The results have been satisfactory. The ruts have been filled up, and the center of the street crowned so it sheds water, with the result that in rainy weather ruts are not formed. From this it follows that there being no ruts to grind up there will be less dust. Often times one will see a good road leading to town only to find almost impassible streets in the town. The road drag can be used to remedy this. It costs but little to either buy or operate it. The housewife will be more than repaid in the decrease in dust that will result.

##### Feeding Montana Lambs

Two trials in feeding Montana range lambs have been made at the Williston, N. D. Sub-Station. The complete results are given in bulletin No. 115 North Dakota Experiment Station. These lambs were purchased in the fall, fed on stubble fields and fattened on alfalfa hay and grain.

##### Black Hills Spruce

Black Hills Spruce is a distinct variety of the White Spruce growing as a smaller tree with stockier leaves and branches and more adapted to prairie conditions. It should be planted quite freely inside the shelter belt for ornamental effects.

##### Soy Beans for Food and Paint

The soy bean produces hay a little

higher in food value than alfalfa hay, and the beans are nearly as high in food value as oil meal. The beans contain oil that is the best substitute for linseed oil in the manufacture of paint that can be produced on a large scale. A bushel of the beans will make over a gallon of oil and the residue is higher in food value than either oil meal or cotton seed meal.

The Soy bean is also a legume and so adds nitrogen to the soil. The soy bean will do better than many crops on a poor sandy soil.

Trials are being made at the North Dakota Experiment Station in producing early maturing varieties that will be better adapted for growing in the state than the varieties now being grown. The earliest of these are the Ogemow which matures in 90 days, the Ito San and medium Early Black which ripen in about 115 days.

##### Kind of Silage and Silo

The temperature of silage in concrete, iron, stone, tile and Gurler (double walled) silos was found to be practically the same in the fall and winter at the Missouri Experiment Station. The temperature of the silage next the wall in general followed the mean temperature of the air but was on an average 10 degrees warmer. In the center of the silo the temperature rose the first 8 to 10 days and then gradually decreased till April. Analysis of silage from the center and next the wall of each one of these silos showed no difference in the composition due to the different materials. There was practically no difference in the temperature of the silage due to the materials of which the silos were built or the method of construction of the silos mentioned above. One kept the silage as warm as the others.

The conclusion of these experiments were that the things to consider in putting up a silo are, first: the, cost of maintenance and durability and the essentials are to have (1) an air-tight wall (2) a smooth wall so the silage can settle well and (3) sufficient strength.

##### Why Milk Sours

Bacteria cause the souring of milk. Bacteria usually get into milk in dirt and the bacteria develop fast when the milk is warm. To keep the bacteria out, keep dirt out of the milk. This means care in milking and care to have the milk utensils clean. Keeping the milk cool will retard the development of the bacteria, that do get into the milk. Cans or vessels that have had milk in them should be rinsed in cool water first as hot water hardens the albumen, of the milk and makes it hard to remove.

##### HEAT AND HORSES

Sunstroke is caused by the direct rays of the sun falling upon the skull. A horse so affected may die suddenly as tho stricken with apoplexy or he may have a gradual paralysis of respiration. The symptoms which usually present themselves are restlessness, pawing, spasms and a marked redness of the mucous membranes lining the cavities of the head. The temperature in sunstroke may not rise above normal during the whole course of the disease.

Another condition very similar to sunstroke is that known as heat stroke or heat exhaustion. This is brought about by over exertion and insufficient heat elimination. The direct rays of the sun are not responsible for this affection which very often occurs to an animal on a cloudy, sultry day. Some of the more prominent symptoms of heat stroke are weariness, profuse sweating, difficult breathing, an extremely high temperature, and a rapid pulse, which gradually grows weaker and upon the approach of death, muscular tremors will be noted. The treatment for sun stroke and heat stroke are the same. Remove the animal to a cool, quiet well ventilated place and permit a stream of cold water to flow over the horse and if possible apply ice packs to the head. If ice is plentiful apply it all over the body.

## I NOW HAVE 65 HEAD OF MAMMOTH JACKS

that cannot be equaled anywhere in the world for size and quality. When you walk around among the jacks you feel as tho you were walking around among the elephants at Ringling's Circus. I am saying this to impress upon you that my jacks are so very large that they more than meet the requirements for size in your community, something you seldom can find any other place. If you have a stallion you do not need I can use him in exchange for a jack if you can come at once. I can also use a good touring car, a truck and a small gasoline plow outfit.

**W. L. DeCLOW,**  
Cedar Rapids Jack Farm, - Cedar Rapids, Mich.





## Poultry Department



### FAILURES IN THE POULTRY BUSINESS

Michael K. Boyer

Every time there is a failure in the poultry business, it becomes the topic for jokes in the neighborhood. Should there be no failure, these wiseacres are sure the party is making only a "hand to mouth" living. It is indeed strange how people generally, who know nothing about the business, smile at the thought of a man making any money out of poultry. To tell them of the large and successful farms spread over the country, is but to elicit a reply like this: "They are all fairy tales, gotten up by ambitious writers who are paid so much per column."

About twenty years ago, in the town where the writer resides, a number of poultry farms started for broiler raising. In the same town a boom was created for the growing of fruit. The storekeepers gladly extended credit to the fruit men, taking chances on next year's crop, but the poultryman could not be trusted for any feed to be paid after his present growing stock would be ready for market, altho in the latter case the storekeeper did not have to wait so long as he would for the fruit grower. It was a case of lack of faith.

One year there was a failure in the fruit crop, a number of growers going to the wall. At the same time several poultrymen failed. No one ever spoke of the fruit failures as a blow to the industry—it was merely that "So-and-So was not fitted for the work." With poultry, however, it was different: "There was never any money in chickens, and the smartest man cannot make it pay."

It is well that every one who undertakes the work does not succeed. Not that the business might be overdone, for even if all would succeed the demand would be equal to the supply. But with every one succeeding, there would soon be a cutting in prices, and the profits would dwindle to absolutely nothing.

Why do some men fail while others succeed? Ask that question of the merchant, the manufacturer, the lawyer, the doctor; ask it of men in all vocations. The reply will be: they were not properly equipped either in facilities or business capacity. Not all men are fitted for poultry work. A man born to be a preacher might

make a poor doctor. A man born for mercantile life might not be worth much at the plow. I believe there are men who are not fitted by inheritance for successful poultry culture. There must be a natural tendency towards that class of work. There are many details in the care of poultry, and there are many men who never notice the small things of life. Constant application to the work becomes tiresome to that class of people. The man who enters the work filled with enthusiasm, and nothing else, is apt to build air castles which sooner or later burst. The plants of such men are generally for sale by the close of the year, and at practically one-fourth what they cost.

There are plenty of stumbling blocks in poultry culture. It is not all plain and easy sailing. It is only the plucky novice who is able to step over those obstacles. The man of experience knows where they are located, and never fears of stubbing his toes.

Others fail because of the lack of working capital. It requires all to keep the machinery in good condition. These people do not estimate the cost, and the consequence is that by the time they are making a start they are suddenly apprised of the fact that the paid-in capital has become exhausted. That is the nearest failure of all, for many such men would have made a success had they only more money to work on. Some men start with plenty of capital, but they spend with too lavish a hand. They buy on too large a scale. An experienced man, with the same capital, would know how to place a dollar where it will do the most good. Again, the poultry business requires good business knowledge. Strict business rules must be enforced. A man who never succeeded at anything else in his life, cannot expect to find poultry a haven.

Another class are the drones, the lazy fellows. They start well, and often have sufficient capital, but they become so tired, and this tired feeling soon gets them to put off things that should have been done. It is the little leaks that sooner or later sink the ship. Energetic, wide-awake men never tire so long as there is work to do; they are plucky and always on the alert. They aim for improvement, and each year try to do better.

If those who are about to embark in the poultry business will first thoroly

investigate their condition, they will know better if they are fit. Let them examine their store of knowledge and count their dollars, for it requires both to successfully launch the ship. Besides, they must have a natural love for fowls. To merely do the work mechanically will not profit.

### Good Management

The better the management the surer the success. That is true in all business. Reckless methods cannot be tolerated. There are men in this world who are excellent workmen—reliable, energetic and economical when working for others—but they cannot manage a business of their own. They do not seem to be able to properly lay their own plans, but they can work out others' suggestions to the very letter. Would one expect such men to successfully manage a poultry farm? Would it be possible for them to successfully manage any business?

Matings must be made for the very trade that is in best demand.

Stock must be bred at the time of year when it will come into the most profit.

Feed must be given that will work the desired effect in the quickest time.

The market must be studied that the best prices may be secured.

In short, every little detail must be handled in a strictly business manner, so that the best good can come out of the least amount of labor and cost.

Such work cannot be accomplished by a reckless, careless fellow, es-

**White and Columbia Wyandottes, Light Brahmas, and S. C. White Leghorns**  
Over 30 years a breeder. Stock and eggs for sale. **MICHAEL K. BOYER, Box 27, Hammon, N. D.**

**Pure Bred Barred Rock Cockerels for sale.**  
Eggs from special pens. 15 for \$1.25.  
**A. CAMPBELL McINTYRE, LAMOUR, N. D.**

## Quality White Rocks

Hatching Eggs and Stock in season. We have the Best. **O. A. Barton, Valley City, N. D.**

## EGGS! EGGS!!

From thoroughbreds—Geese, Turkeys, Pekin, Rouen, Muscovy and Runner Ducks, White, Barred, Buff Plymouth Rocks, Hamburgs, Games, Black Langshans, Houdans, Orpingtons, Rhode Island Reds, White and Silver-laced Wyandottes, Partridge Cochins, Leghorns, Bantams, Pearl and White Guineas. Poultry eggs, 15 for \$1.00; also White Rabbits, Hares, Fancy Pigeons and Guinea Figs. Write for free Circular. **D. L. Bruen, Platte Center, Neb.**

## BARRED P. ROCKS

Big, Strong, Prize-Winning Stock  
Hawkins, Bradley Strain  
Eggs and stock in season at very reasonable prices.

**PERCY BEALS**  
BOX 736 : FARGO, N. DAK



pecially one who never succeeded at anything he ever undertook.

Some men manage business just as some men drive horses—they are constantly jerking on the reins, nearly jolting the animal's head off, and never seemingly making any headway.

What I call good management is to have houses that are comfortable—warm in winter and cool in summer; stock mated and bred during the months of February to June, so as to have layers for September to January, the months when the eggs in the markets are getting scarce, and the prices going higher. Such pullets will continue good work right thru the winter and spring, and by February all the left-over hens will be adding to the pile. The value of such work is shown first, in giving eggs at a season when they bring the best money—and it will be giving eggs in January, February and March, in large quantities, when the product can be turned into broilers or roasters—and just when they, too, command the best prices. It is not the number of hens that a man keeps so much as how he keeps them. A study of feed is imperative. To feed a hen for fat we cannot expect eggs; to feed for eggs we cannot look for fat. A hen in the height of her laying season will not become overfat from heavy feeding. She will require a lot of food to keep up the strain upon her system, and she will need a surplus to make eggs. To feed a hen the same during her laying season as she was fed while not laying, is a mistake that a great many make, and it accounts for much of the poor success in getting eggs when they are most needed. If a certain diet has kept the hen in good condition when she was not laying, it will require just that much more—not so much in quantity as quality—to give her the proper material to manufacture eggs.

The great secrets of success are to keep everlastingly at work, and to so shape the work that it will tell best in returns. No man loves to labor without pay, but he will surely do that with poultry if he does not properly manage.

Some men are always working and yet never accomplish anything. They cannot properly direct their work. It is true that in poultry work there is much to do that does not show itself, but there is enough that does display itself to make up for that part which seems hidden. When a man shows good returns from his stock, it is not a question of how he spent his time but how well he worked. Those about embarking in poultry culture must keep in mind that it requires capital, business ability, and general good

management to make a success. Without these qualities none should enter the ranks, and, for that matter, they should enter no other business. There is not so much money in a poultry farm as there is in many other vocations, but there is a good, honest, healthful living in it for those who will properly apply themselves to the task.

### THE VALUE OF INFERTILE EGGS

During warm weather much loss is due to the development of the germ in the eggs which are fertile. This is brought about by the broody hen sitting on the nest or by keeping the eggs in too warm a place. Infertile eggs contain no germ to be developed, are easily preserved, bear shipment well and are better for cold storage. After the breeding season all males should be removed from the flock.

### HOUSING CHICKS

When the chicks are removed from the brooder the so-called colony house is fine. Such a house 3x6 feet, 3 feet high in front and 2 feet high at the back, will house 25 chicks to maturity. The construction should be such as to provide for an abundance of fresh air in warm weather. A good way is to have the upper half of the front open for ventilation. A screen can be

nailed on and a muslin door provided for cold and stormy weather. This should be attached so it can be removed in nice weather. Chicks of different ages should not be placed in the same house. Nor should chicks be placed in the same house with old birds.

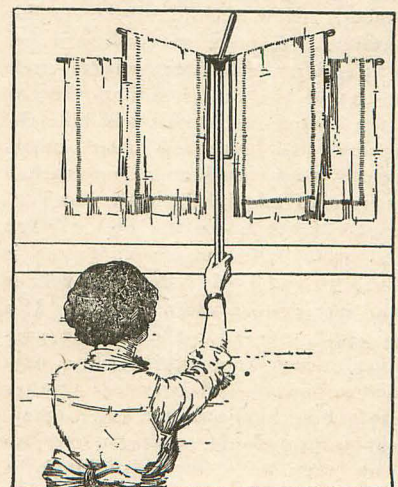
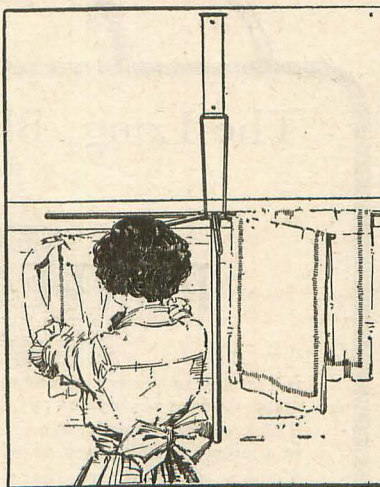
### CLEAN EGGS

The method of handling market eggs has much to do with the selling price. Keep the poultry clean as well as the nests as this will help keep the eggs in a good condition. The eggs should be gathered at least once a day.

The color of the yolk of the egg is affected by the food taken into the system. An absence of green food is frequently shown by the paleness of the yolk.

Irregular feeding and watering cause a distention of the crop, in other words, the fowl overloads and distends the crop when fed frequently causing it to become permanently enlarged and to hang down, rendering it impossible to perfectly press the food thru the oesophagus into the stomach, the food and water thus remaining in the crop becoming sour, and producing inflammation and disease, better known as "soft crop" and inflammation of the crop.

## Housewife's Premium



### HI-LO CLOTHES DRYER

Send only \$1.00 and your subscription will be renewed for two years and Hi-Lo Dryer will be sent you, post paid. If you prefer, we will enter two names for one year each.

NORTH DAKOTA FARMER, : : : : LISBON, N. D.



## School and Home

### HOT-WEATHER HELPS

#### Homemade Fireless Cooker, Iceless Refrigerator, and Shower Bath Add to Comfort of Farm Home.

Many homemade devices which add to the comfort of the housewife and members of the family are being made and used by women county agents in the field and by the women who are working as their demonstrators in connection with the extension work, south, of the States Relations Service. The following are especially useful during the summer months:

#### Homemade Fireless Cooker

A wooden or tin lard pail, lined with two thicknesses of paper and provided with a close-fitting cover, may be used for the outside container of the cooker. Allow for 3 inches of packing on all sides and at the bottom of the pail. A gallon oyster can will serve very well for the nest, which should be wrapped on the outside next to the packing with asbestos and a piece of asbestos placed under the bottom to prevent the scorching of the packing when hot soap-stones are used. Shredded newspaper and excelsior make a good packing. Pack this very tightly around and to the top of the nest, the top of which should be about 3 inches below the lid of the outside container. A piece of cardboard cut to fit inside the lard can with a circle cut out of the center around the top of the oyster can or nest will hide the packing and make a neat finish. Place a 3-inch cushion of unbleached muslin, stuffed tightly with excelsior, on top of the lid of the nest. When the top of the outside container is placed on and hooked down, it will be tight enough to cause a pressure. If a tin pail is used for the outside container, it may be enameled white, or a wooden pail stained brown, making a neat-looking appliance for any kitchen. Regular aluminum fireless-cooker utensils may be used for cooking the food in the nest, but any kind of a vessel with a close-fitting top and one that fits closely in the nest is suitable.

A fireless cooker similar to this, together with other labor-saving conveniences, were built and successfully demonstrated by the members of a woman's home demonstration club in Covington, Alleghany County, Va.

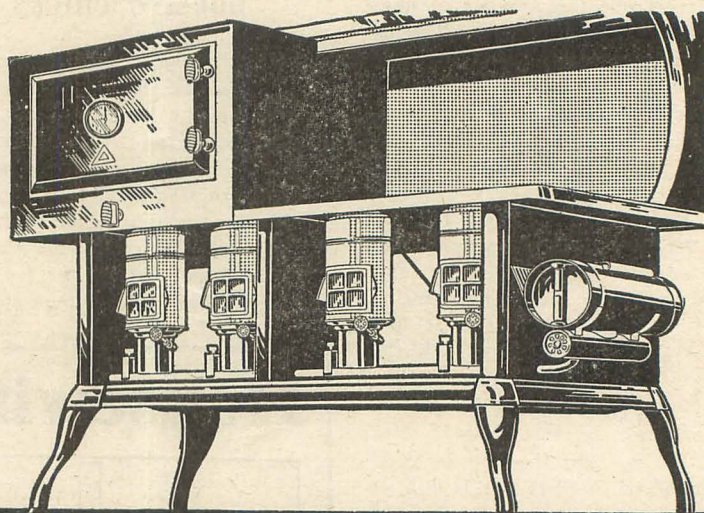
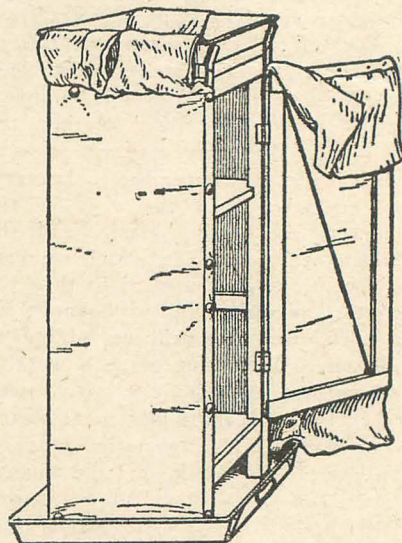
The cost of this fireless cooker was estimated at 25 cents.

#### The Iceless Refrigerator

A companion convenience to the fireless cooker for the hot summer days is the iceless refrigerator, or milk cooler. This consists of a wooden frame, covered with canton flannel or some similar material. It is desirable that the frame be screened, altho this is not absolutely necessary. Wicks made of the same material as the covering rest in a pan of water on top of the refrigerator, allowing the water to seep down the sides. When evaporation takes place the heat is taken from the inside, with a consequent lowering of the temperature. On

dry, hot days a temperature of 50 degrees can be obtained in this refrigerator. The following description will aid in the construction of this device:

Make a screened case three and one-half feet high with the other dimen-



### The Long, Blue Chimney of the

### NEW PERFECTION OIL COOK STOVES

is the key to perfect combustion. This most desired of cook stoves is easily filled and is always ready.

Think of the comfort of touching a match to a wick and in a minute having any kind of a fire you want.

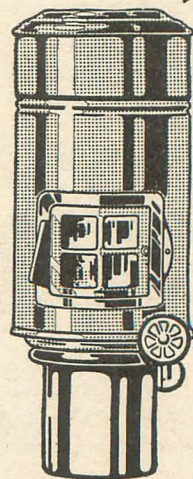
Think of doing away with excessive heat of a coal or wood-burning range, and at about one-third the cost.

Think of no blackened cooking utensils to scour.

You can't afford to be without one this summer. Write for booklet giving full description and prices of the various types.

#### Standard Oil Company

72 W. Adams St. (Indiana) Chicago, U. S. A.  
For best results use Perfection Oil.





sions 12 by 15 inches. If a solid top is used, simply place the water pan on this. Otherwise fit the pan closely into the opening of the top frame and support it by 1-inch cleats fastened to the inside of the frame. Place two movable shelves in the frame, 12 to 15 inches apart. Use a biscuit pan 12 inches square on the top to hold the water, and where the refrigerator is to be used indoors have the whole thing standing in a large pan to catch any drip. The pans and case may be painted white, allowed to dry, and then enameled. A covering of white canton flannel should be made to fit the frame. Have the smooth side out and button the covering on the frame with buggy or automobile curtain hooks and eyes, arranged so that the door may be opened without unfastening these hooks. This can easily be done by putting one row of hooks on the edge of the door near the latch and the other just opposite the opening with the hem on each side extending far enough to cover the crack at the edge of the door, so as to keep out the warm, outside air and retain the cooled air. This dress or covering will have to be hooked around the top edge also. Two double strips one-half the width of each side should be sewed on the top of each side and allowed to extend over about two and one-half or three inches in the pan of water. The bottom of the covering should extend to the lower edge of the case.

Place the refrigerator in a shady place where air will circulate around it freely. If buttons and buttonholes are used on the canton flannel instead of buggy hooks, the cost should not exceed 85 cents.

#### Homemade Shower Bath

A very simple, convenient, and cheap arrangement for a homemade shower bath has been built by this Virginia club, and is considered especially useful in homes where there are many children. This device was made by using a 2 or 4 gallon tin bucket. A hole was punched in the bottom and a piece of pipe about one and one-half to two inches long soldered in the opening. A piece of rubber hose 4 to 6 feet long was attached to this and a sprayer from the watering can or a nozzle placed on the end. A rope was tied to the handle of the bucket and run thru a staple which was driven in the joist beside the window sash, making a pulley by which the bucket could be raised or lowered to suit the convenience of the person taking the shower. A hook was placed below this staple so that the rope could be fastened to hold the bucket in place, and a clothespin used over the rubber tube

to cut off the water. A large tin tub was placed underneath to stand in. Estimated cost of this convenience was as follows:

A 2-gallon tin bucket.....	\$0.15
Medium-sized zinc bucket.....	.75
12 feet of rope.....	.07
Nozzle and rubber tubing.....	.65
Pulley.....	.10
Piece of piping.....	.10
Clothespin.....	.01
White paint.....	.15
Total.....	\$1.98

#### PRACTICAL DEMONSTRATION

How a teacher of 60 pupils in a one-room schoolhouse, located in the forests of North Carolina, succeeded in getting her pupils interested in practical agriculture with a pig and less than an acre of uncultivated land, is told in a report of one of the field workers of the department.

A farm paper offered a pure-bred pig as a prize for securing a certain number of subscriptions. This energetic school teacher set out among the parents of her pupils and succeeded in selling enough subscriptions to win the pig. When the pig arrived the pen was already built by the school children on the school grounds for its reception. The parents were invited, and talks on pig raising were made. The rest of the day was spent in driving around to some of the best pig farms in the county, where various kinds of live stock were scored and discussed.

The pupils learned that a pig could not thrive entirely on scraps from

lunches and occasional ears of corn. An interested member of the school committee offered the use of his team and implements, and the pupils started to work clearing the forest land to use as a forage pasture. They then planted crops of rye, wheat, rape, and grass to afford the pig grazing plots of green forage. A cold frame was also put in, and cabbage plants were grown for sale, the money thus realized being turned over to buy whatever additional feed was needed to keep the pig.

As a result of the interest aroused, tax-payers and members of the school board have given their support to the establishment of a small demonstration farm. More land is to be purchased, and the county agent is to visit the school each week. Since the pig was brought into the school, less than a year ago, the membership of the county pig club has more than trebled.

#### PRESERVING THE HEALTH

Care must be taken in this preserving not to allow popular prejudice and accepted custom to spoil the delicate flavor given by the fruit of common sense.

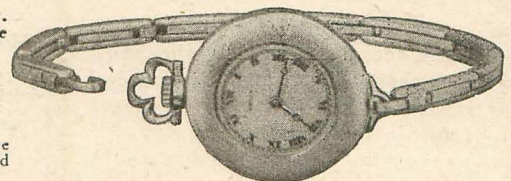
A very simple recipe for preserving the health, and one that will never fail if directions are carefully followed, consists of a good-sized measure of common sense, add equal quantities of independence, and thoughtfulness. Mix well with fresh air and physical exercise. Then take the spices of sanitary, physiological and hygienic knowledge, and grate down to the consistency for everyday usage, and

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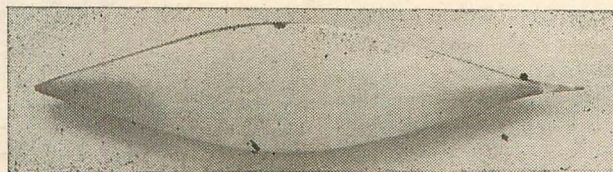
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stir briskly in the preserving pot. Add cold water enough to form a syrup of cleanliness and vitality. For extra flavoring, nothing is better than cheerfulness and good temper. Simmer well, and serve to the separate members of the family in carefully-considered dress, sufficiently warm and loose to permit the freedom of every organ, muscle and nerve, to insure perfect circulation of the blood.

Preserving the health is the most important preserving done in the family, and, unlike most other preserving, the fruits are obtainable at all seasons of the year. But simple as the process is, and few as are the necessary ingredients, a very limited number of housewives do this preserving for everyday use in the household.—Economical Administration Cook Book.

ed for children from two to three years; and a daily program is suggested for the convenience of the mothers:

7:30 a. m.:

Cereal—well-cooked oat, wheat or corn preparation, with thin cream or milk and very little sugar. Cereals should be cooked three hours in a double boiler, and flavored with a little salt when being cooked.

Glass of whole milk, warmed in the cool months of the year.

Egg, soft boiled, poached or coddled.

Toast, or dry bread and butter.

10:00 a. m.:

Fruit—use one orange and strain the juice,—or a baked apple, and two graham crackers; or

Warm milk, one glass, with dry bread or toast.

2:00 p. m.:

broiled, roasted, or boiled; or, fish; cut into small pieces, flavored with a little salt. Use no pepper, sauces or condiments.

Potato—baked, mashed, with a little salt, butter and milk, or salt and cream; or, boiled rice or spaghetti, both thoroly cooked; with butter or cream.

Green vegetables—either carrots, asparagus, string beans, peas, spinach, young beets, or squash, each cooked until very soft, with a little salt in the water; strained thru a colander or mashed.

Dessert: Apple tapioca pudding, or baked apple, or apple sauce or stewed prunes, or plain custard, or junket.

Drink—Water. No milk at this meal.

Stale bread—with butter.

6:00 p. m.:

Bread and milk; or cereal,—farina, arrowroot, and wheat,—or milk; or milk toast; or dry toast or bread with glass of milk.

Raw fruit juice and milk should not be given at the same meal.

Do not give a child of this age any of the following foods: Pork in any form, or salted meats or salted fish; cabbage, onions, celery, radishes, lettuce, cucumbers or raw tomatoes; hot



For a good Rural Booster give me the Livestock "Fan" on the Farm.

#### CARE OF THE BABY After the Second Year

When the baby reaches the third year he should be fed four times a day at regular intervals, having the heaviest meal in the middle of the day.

It is of the utmost importance to teach him to chew his food carefully and thus to take plenty of time at his meals. But since his tiny teeth can only partly masticate his food, this should be properly prepared for him. Meat should be cut into small pieces, vegetables either mashed or put thru the colander, and all the cores, skins and seeds should be removed from fruits.

He should not be allowed to drink while eating solid food, lest he fall into the habit of washing down his food before it is thoroly chewed, as do so many of his elders.

The following foods are recommend-

Vegetable soup—one teacupful—or, meat broths with rice or arrowroot.

Meat—beef, mutton, or chicken,

## CANCER

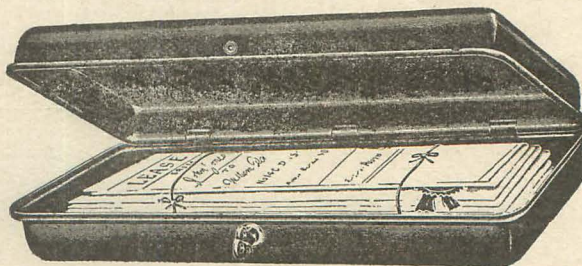
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breads, or griddle cakes; sweet cakes, pastry, syrups, or jellies; nuts or candies; bananas, nor any green or over-ripe fruit; tea, coffee, wine, beer, cider or soda water. Mothers are apt to err chiefly in the matter of sweets in feeding children. An excess of sweet food, not only upsets the young stomach but destroys partially the appetite for plain food.

Children should be taught to eat simple, well-cooked food, but should not be forced to eat when they have no appetite. If a child shows a disinclination to eat some special food, which he ought to have, this should be given first at the meal, even if only a small quantity is eaten. Do not fall into the error of scolding the child at meal times, which should be one of the pleasantest hours of the

all the time. In several weeks rapid growth will begin and in from 6 to 10 weeks, depending on the temperature, there will be a good supply of fresh rhubarb. The rhubarb produced in this way—developing in the absence of light—has small leaves, is more tender and of better quality and has such a delicate skin that it need not be peeled for table use. As this process removes all the plant food from the roots without adding any, the roots are worthless for any further use. A continuous supply of fresh winter rhubarb can be maintained by bringing in only a few roots at a time. Be sure that the roots have been frozen before they are brought in, for if not frozen, they will not do very well. The excellent quality of rhubarb produced in this way makes it



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day, full of fun and joy. A little judicious coaxing will usually result in the child's taking the right food in sufficient quantity.

Methods of preparing meats, vegetables and soups for young children are given in *Infant Care*, a little book, which is sent free to all who ask for it, addressing the request to the Chief of the Children's Bureau, U. S. Department of Labor, Washington, D. C.—Children's Bureau, U. S. Department of Labor.

Fresh rhubarb for winter use can be secured by digging up some old roots late in autumn, allowing them to freeze and then bringing them into a dark cellar where they should be covered with soil or ashes about 2 inches over the tops of the roots as they are spread out on the ground in a single layer. They should then be well watered and should be kept moist

well worth while to use fully a dozen old roots for the purpose each winter.

If skim milk be used instead of water in the preparation of whitewash, the wash will resist the action of moisture; also, if a little copperas water be used, the disinfecting properties of the preparation will be enhanced.

The following method is excellent:

Fill a large pail half full of quicklime. Pour upon it one gallon of milk, in which a little copperas has been dissolved, and stir until ebullition ceases; then stir in one pint of linseed oil, and add enough more milk to make the wash of the consistency of thin paste.

Paper can be put on over this whitewash if the paste is made of thick sour milk in which flour has been stirred smoothly. No cooking will be necessary.

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To wash delicate laces put the lace into a glass fruit jar. Pour over it a cold soap solution. Place the jar on a cloth or a wire frame in a kettle of cold water and bring to a boil. Then move to back of stove and let stand three or four hours. Put lid on jar and shake gently until the water looks soiled. Then pour off the first water and pour on clean hot water re-

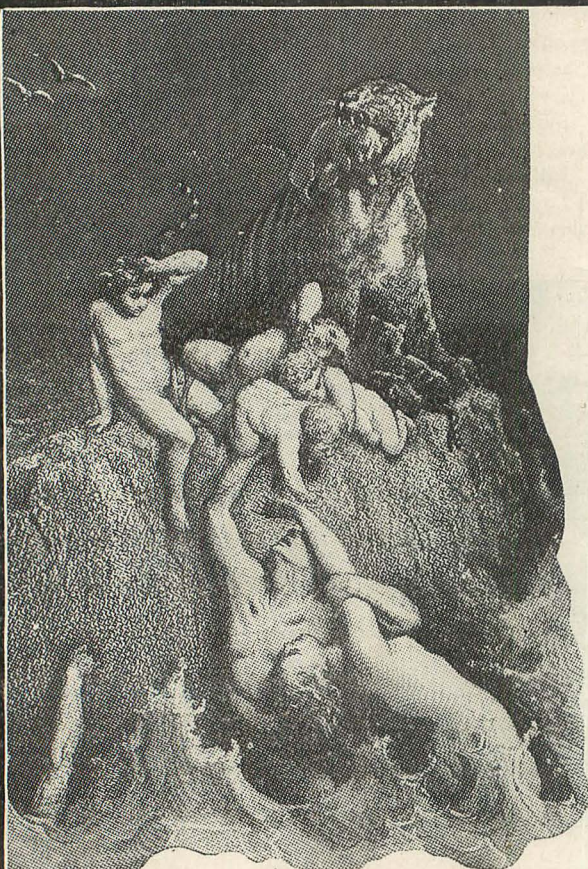
peating this several times. Take out the lace and squeeze the water out carefully, then lay in a towel and preess gently. Pin the lace to a dry towel and let it hang for a little while. When partly dry press it, face down, with a moderate iron.

Before heating milk in a saucepan, rinse the pan with water. The milk

will not be so apt to scorch and the pan will be easier to wash.

To clean white furs wash in bran. Light colored wool clothing may also be cleaned very satisfactorily by a good rubbing with dry bran.

When quiet is desired, stuff cotton in your ears instead of trying to make the juvenile world stand still.



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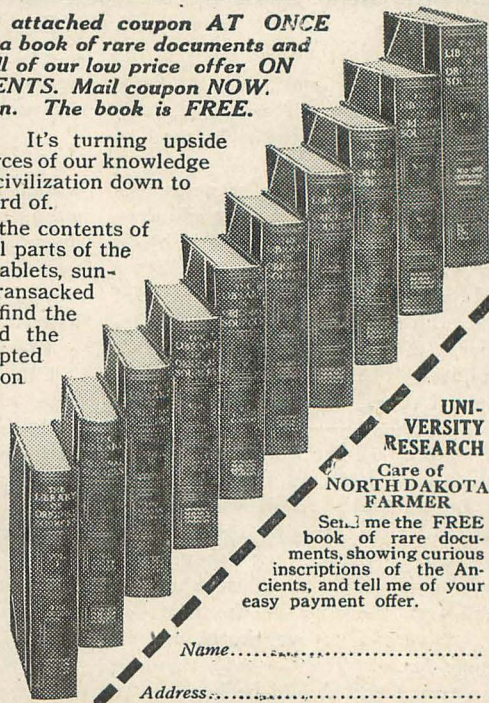
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## Seasonable Receipts

Mrs. Sadie Baird, Editor

### Chocolate Blanc Mange

Two cupfuls scalded milk, five tablespoonfuls corn-starch, one-half cupful sugar; dash salt, one-third cupful cold milk, one and one-half squares chocolate, three tablespoonfuls hot water, whites three eggs, one teaspoonful vanilla; mix the cornstarch, sugar and salt in the cold milk; pour into the scalded milk in a double-boiler. Cook ten minutes, stirring constantly till it thickens; add the chocolate melted in the hot water; beat until smooth; add the whites of the eggs beaten stiff and the vanilla; pour into a mould and chill; serve with whipped cream.

### Floating Island

One quart sweet milk, yolks six eggs, one-half cup sugar; put in double boiler and cook until it begins

to thicken; remove from fire and add one teaspoonful vanilla; have the whites beaten stiff with two tablespoonfuls sugar and turn over custard while it is hot; sprinkle over top shredded cocoanut and a few small spoonfuls of jelly or jam may be scattered over the top. If preferred the whites may be steamed by turning them over a pan of boiling water a few moments. The custard may be served in individual glasses with a spoonful of the whites on each glass.

### Prune Whip

Whites of three eggs beaten stiff; mix in one cupful of cooked prunes (chopped fine), a little sugar and vanilla. Bake in buttered pan about fifteen minutes. Serve cold with cream.

### Cream Puffs

Boil together one cupful water and one-half cupful butter; while boiling add one cupful flour, stir until smooth then cool and add three eggs, one at a time, not beaten; stir smooth, drop on a pan, bake twenty-five minutes. To make cream for filling take one-half cupful sugar, one egg, two heaping teaspoonfuls flour; pour this into a one-half cupful boiling milk, flavor when cold; cut open puffs and fill with cream.

### Orange Pudding

Four oranges sliced in a deep dish; sprinkle with sugar, cover with plain sornstarch pudding. The juice of the oranges makes its own sauce.

### Oatmeal Bread or Muffins

One egg, one cup sugar, one-half cup butter, one cup sour milk, two cups Quaker Oats, one cup flour, pinch of salt and a little nutmeg, one teaspoon soda. Sweet milk and baking powder may be used instead of sour milk and soda. Bake in a loaf or baked in muffin rings these are delicious for breakfast.

### Pop Overs

Two cups flour, two cups sweet milk, two eggs, one teaspoon salt, one teaspoon butter. Bake in quick oven, fifteen minutes.

### Salad Dressing

Three eggs, one tablespoon sugar, one tablespoon melted butter, one tablespoon salt, one tablespoon mustard, two tablespoons flour. Stir until smooth. Add one cup vinegar and one cup milk. Cook until thick.

### Egg Salad

Twelve hard boiled eggs, a layer of these sliced, cover with salad dressing,

sprinkle with grated cheese. Repeat until eggs are used. Cover last layer of eggs with dressing and cheese, scant cup salad dressing with three-quarters cream whipped.

### Currant Ice

One pint currant juice, two lemons, and one orange, three cups sugar, two quarts water. Pour juices over sugar and stir till dissolved, then add water and freeze. You can use two glasses of currant jelly if you have not juice.

### Lemon Sherbet

One and one-half quarts of milk, 1 pint cream, three and one-half cups of sugar, juice of two oranges and two lemons. Chill milk and cream first; then add the sugar and juice, and freeze.



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